

PDA BD 937

76347

T H E   K O R E A   S T A T I S T I C S   P R O J E C T

April 23 1958 - May 31 1962

Submitted to the

GOVERNMENT OF THE REPUBLIC OF KOREA

and the

AGENCY FOR INTERNATIONAL DEVELOPMENT

In accordance with the terms of Article I B of  
Contract No. ICA-W-524

Surveys & Research Corporation  
1010 Vermont Avenue, N.W.  
Washington 5, D.C.

## TABLE OF CONTENTS

	Page
PREFACE	i
 Chapter	
I. BACKGROUND OF KOREA STATISTICS PROJECT	1
II. OBJECTIVES AND "SERVICES TO BE PERFORMED" ✓	7
III. THE WORKING PARTY IN KOREA	13
IV. KOREAN STATISTICS WHEN SAG BEGAN WORK	21
V. THE CENSUSES DEMAND ATTENTION	30
VI. THE KOREAN DATA PROCESSING CENTER	37
VII. CENSUSES ARE NEARING COMPLETION	47
VIII. SERVICES RELATED TO CURRENT STATISTICS	57
Index of Industrial Production	59
Index of Wholesale Prices	61
Index of Consumer Prices in Seoul	62
The Family Living Survey	63
Foreign Trade Statistics	63
Gross National Product	65
Economic Activity of the Population	66
Agricultural Statistics	68
The Input-Output Study	70
Monthly Survey of Mining and Manufacturing	73
Census of Industry	75
Population Growth	75
Vital Statistics	76
Published Aids to Korean Statisticians	76
The Flow of Current Advisory Activities	79
 IX. EFFORTS TO IMPROVE STATISTICAL ORGANIZATION	 82
X. THE INTANGIBLE GAINS	94
An Informed Korean Appraisal of Project Results	95
A Changed Statistical Climate	98

**TABLE OF CONTENTS**  
(continued)

Chapter	Page
<b>XI. CONTINUATION OF CURRENT ACTIVITIES</b>	<b>104</b>
Analysis of Census Statistics	105
Post Enumeration Survey of the Censuses	105
The 1963 Census of Industry	106
Survey of Economic Activity of the Population	106
Technical Manpower Survey	106
Agricultural Surveys	107
Industry Survey of the Korean Reconstruction Bank	108
Vital Statistics	109
<b>XII. ELEMENTS NEEDED FOR FURTHER STATISTICAL DEVELOPMENT</b>	<b>110</b>
The Time Factor	110
The Painful Need to Think	112
Utilization of Available Competence in Responsible Positions	115
Recognition of Statistics as Technical and Professional	116
Growth of a Statistical Profession	118
Faster Growth of a Statistical System	121
<b>APPENDIX A.</b>	<b>125</b>
Names, Functions, and Dates of Service in Korea of Members of Field Staff, Statistical Advisory Group, Surveys & Research Corporation	
<b>APPENDIX B.</b>	<b>127</b>
Selected List of Statistical Courses, Lectures, and Addresses Given to Korean Audiences by Members of Statistical Advisory Group	
<b>APPENDIX C.</b>	<b>130</b>
Partial List of Reports to ROK Government on Statistical Subjects (Published Works and Unpublished Memoranda or Communications)	

TABLE OF CONTENTS  
(concluded)

	Page
APPENDIX D.	134
Series of Three Lecture and Laboratory Courses Entitled "Introduction to Punch Card Data Processing" Presented by Scott V. Fairley, Statistical Advisory Group, April 1963	

## PREFACE

The work performed under the statistics contract should be appraised not only in the light of Korean political and social instabilities during the past five years but also with recognition of the effects of their history upon the character of the Korean people. An American visitor arriving in Seoul after some hours in Tokyo is likely to be impressed by contrasts. The Japanese, for all their modernity, conform to the Western image of "the inscrutable Oriental." The Koreans are extroverts -- "the Irish of the Orient." Women are seen walking in long strides. A momentary pause on the street may attract a circle of eager students who regard the visitor as an opportunity to practice their English or to solicit advice concerning overseas educational possibilities.

Perhaps such traits reflect a reaction from Korea's historical isolation as "the Hermit Kingdom." Hemmed in between two larger neighbors, China and Japan, it long repulsed external influences and was internally absorbed in endless factional struggles. Rivalries among "the three kingdoms" -- still surviving in the civil service and the army in the form of regional factions -- and between family groups -- the exogamous clans -- dominated public affairs. Power was unsheathed and those who lacked it developed subtle methods for the maintenance of individual security. Have these ancient characteristics entirely disappeared? This could hardly be expected.

Nor is it surprising that the Korean people encountered by Westerners today are likely to exhibit ambivalent traits. They may be ardent friends and affectionate family members, but incompassionate

toward opponents; loyal to aspirations and ideals, but unhesitant about putting personal advantage above group or national interests; highly intelligent and industrious, but slow to cooperate in a common cause; eager for advancement, but undisciplined in the use of talents.

When such contradictions are experienced, the visiting technician may have a sense of frustration. His accomplishments evaporate. Understandings upon which he depended are not followed by the expected results. To what extent omnipresent difficulties of communication are responsible for his bafflement is seldom wholly clear.

Despite mutual difficulties of understanding, the eagerness of this old but newly young nation for national adulthood is a constant stimulus to the desire of sympathetic visitors to assist in its attainment. A large majority of the field staff of the statistics project and members of their families developed a strong affection for the Korean people and embraced their cultural interests to a degree far beyond "the call of duty." They formed many intimate and enduring personal friendships.

In addition to the necessity of learning and adjusting to unfamiliar psychological patterns, the work of visiting statisticians has been affected by specific cultural and institutional forms quite different from those with which they are familiar.

For example, according to the Korean Central Weights and Measures Bureau, as reported in The Korean Republic, "three different systems - metric, pound-yard and chok-kwan ... are commonly used in Korea but mixed" (emphasis here supplied). Hence, "an individual in the Korean community must remember all units in all three systems of weights and measures." Statistical comparisons among physical measurements may be difficult!

To cite another illustration with statistical implications, individual Korean ages can be made to conform to Western conceptions when it is remembered that each calendar year within which a person has lived is counted as one whole year in totaling his age. He is one year of age at birth and two on the following New Year's Day. The simplicity of the conversion diminishes, however, when it is learned that Korea's twelve-month calendar is lunar, with an extra month thrown in every third year or so to bring it into closer conformity with the solar year. Hence, New Year's Day is migratory in relation to the Western Gregorian calendar.

The Westerner's education in such elements of Korean culture will be incomplete if he remains only long enough to claim homeland Federal tax exemption. The staff of the Korea statistics project, though composed of changing personnel, was long enough in the field as a group to acquire much understanding of the indigenous culture that could be passed on from individual to individual member, without compelling each to learn anew "the hard way" by personal experience. At the end of five years, the group had arrived at "the beginning of wisdom": it was aware of how little its members knew about the country and the people they had served. Yet they were able to look back upon no small record of accomplishment, difficult as it might be in some respects to know how much of the gain resulted from their efforts and how much might have occurred without them in the normal course of social evolution.

The formal purpose of this final report of the project is to comply with contract requirements. The project director who prepared it believes that the five-year record has more than formal interest. He hopes that his attempt to summarize the record may be persuasive that despite

uncertainties of appraisal, many unforeseen difficulties and many shortcomings in results, the project has substantially advanced significant objectives that can never, in any country, be completely reached.

An account of work and project accomplishments in full detail has not been attempted. It will be an important accomplishment, as we think, if pressures have been released within Korea toward the further attainment of contract objectives after contract termination. The hope for this rests in part upon seven published volumes in the English and Korean languages, termed "interim reports to the Government of the Republic of Korea," that the Statistical Advisory Group is leaving behind to serve as guides for further statistical improvement. These have been supplemented by a larger number of partially authored publications, memoranda, other communications, and oral advice and teachings.

The present report, then, is more of a guide to the work done under the contract than a complete record of it. It describes the beginnings of proposals for statistical assistance to the Korean Government, the main lines of effort as the work progressed, the condition of statistics in Korea as first encountered, an estimate of the principal accomplishments of the program, and an outline of the principal statistical needs that remain.

Stuart A. Rice  
President  
Surveys & Research Corporation

May 31, 1963



# I

## BACKGROUND OF KOREA STATISTICS PROJECT

The idea of helping Korea with its statistics evolved over several years in the course of events with which present personnel of Surveys & Research Corporation were closely associated. The historical sequence gave shape to the objectives and character of the work ultimately undertaken by that firm under contract with the International Cooperation Administration, predecessor of the Agency for International Development.

The sequence began with two statistical missions to Japan during the early postwar period. Both were headed by Stuart A. Rice, then an Assistant Director of the United States Bureau of the Budget, in charge of its Office of Statistical Standards. The first mission in late 1946 was organized at the request of General Douglas MacArthur, Supreme Commander, Allied Powers, whose organization was known as "SCAP." The responsibilities of American military authorities in the Far East were at that time centered in Tokyo and included South Korea, whose economic and statistical problems already engaged, though somewhat distantly, the attention of SCAP's Economic and Scientific Section, headed by General William F. Marquat.

Memories of the two statistical missions to Japan lingered throughout the area. Following his departure from Federal service at the end of 1954, Dr. Rice joined in organizing Stuart Rice Associates, predecessor of Surveys & Research Corporation; and in January 1956, on its behalf, undertook a study of the statistical needs of the Ryukyu Islands. The study was requested by General Charles K. Gailey, Chief of Civil Affairs and Military Government of the Department of the Army,

and was under contract with that Department. While preparing his report<sup>1/</sup> from Eighth Army Headquarters in Tokyo, Dr. Rice was asked to extend his trip to Seoul for a brief examination of Korean statistics and the possibilities of their improvement. In the Korean capital he met with American aid officials, United Nations personnel, and Korean official and intellectual leaders. All professed their concern about the inadequacy of the country's statistical data.

American technicians in the Office of the Economic Coordinator (OEC), predecessor of the United States Operations Mission (USOM), exhibited frustration at the untrustworthiness of the factual tools they employed in seeking the country's rehabilitation. One said with exasperation that he wished he knew whether the nation's population was ten or twenty millions. Behind this figure of speech was anxiety as to whether the food requirements of South Korea might not be grossly overestimated.<sup>2/</sup> A medically

---

1/ A classified document.

2/ His remark, though serious, was not understood literally. Korea's "1st Population Survey," as recorded in Korea Statistical Yearbook 1961, Table 27, on September 1, 1955 (the distinction from prior "censuses" is not clear) reported a total population of 21,526,374. Nearly a decade earlier, but before the Korean War, the United States Military Government had reported 19,369 thousand persons in a "de facto" count on August 25, 1946. Later, in 1947, a "citizen registration" by the same authority obtained a figure of 17,800 thousands, obviously short of the true total. In the light of the 1960 census results, the 1955 census total with which they are usually compared appears to reflect an underenumeration.

trained Korean in American employ attributed much uncertainty concerning demographic and health problems to the gross unreliability of vital statistics, the haphazard methods of obtaining which he described.

Several Americans admitted to ineffectiveness in their work in the absence of simple but dependable facts about the nation's economy. Inflation was unchecked,<sup>1/</sup> but data on prices, production, and other factors associated with the problem were either unavailable or discredited. In most instances, statistical deficiencies were attributed or attributable to the uncontrolled and unscientific methods by which data were obtained.

A desire by responsible Korean officials for American assistance and advice in improving national statistics was expressed at a farewell dinner for Dr. Rice arranged by Mr. Wood and Dr. Chawner. This was attended by high ranking members of the executive and legislative branches of the ROK Government. In his remarks, the guest quoted the views of leading Japanese economists that their nation had undertaken and lost its war with the United States because of dependence upon inferior statistics. In a response, the Chairman of the Home Affairs Committee of the ROK General Assembly observed that if Japan, with a higher state of development than Korea, had needed statistical help from its erstwhile enemy, how much more in need, and how much more entitled to it, was his own country. He pleaded for a statistical mission to Korea similar to those that had been sent to Japan.

In reviewing this request in relation to their own statistical needs, OEC officials faced the question: in whose behalf should external assistance

---

<sup>1/</sup> It was later brought under effective control, largely through the efforts of Dr. Lowell J. Chawner, Economic Advisor to Mr. C. Tyler Wood, the Economic Coordinator for Korea.

in statistics be provided? OEC itself needed help in making the best use of available data and in obtaining better data; but such help would not necessarily touch the source of the problem. This lay in the general backwardness of Korean statistical development and the overall inefficiency of Korean statistical organization and practices. Mr. Wood and his chief advisors agreed that if technical aid in statistical improvement were provided, the assistance should be broad and given to the Korean Government rather than the OEC.

This conclusion became an accepted principle for further discussion -- one of the two basic guidelines for the subsequent Korea statistics project. Its circumvention was sometimes sought by OEC subordinates who, understandably, felt in need of statistical help in their own particular activities.

The second guideline upon which Mr. Wood and his advisors agreed was a corollary of the first: technical assistance to Korea in statistics, if it were to touch the basic shortcomings, must be given to its government as a whole. Like the first, this principle was often misunderstood and sometimes evaded throughout the life of the later project; though misunderstandings in this instance were greater among Korean than American personnel and hence often more difficult than the first to deal with.

Misunderstandings of the second principle reflected the customary relationships between OEC and ROK Government agencies. "Assistance to the government as a whole" did not conform to the conception of "counterparts" upon which these customary relationships were based. Most visiting technicians were expected to work with their "opposite numbers" in the Korean administration, and it was natural to look for the counterparts of American statistical advisors within some particular ROK agency.

However, the statistical activities of the ROK Government, like those of the United States and most other Western nations, were highly "decentralized." They existed in practically all major subdivisions of the central government, in pseudo-governmental agencies, and in provincial and other subordinate units of administration. As in Washington three decades ago, no single voice in Seoul could speak in technical or administrative terms for all of these units, or evoke their compliance with common technical and professional standards. The statistical issues requiring the attention of advisors from the outside world involved all such units and not any one of them exclusively.

Difficulties in applying the principle of service to the entire ROK Government arose also from the initially latent but easily aroused desire of particular statistical organizations to extend their jurisdiction and influence. The largest of them, the Bureau of Statistics in the Ministry of Home Affairs, claimed authority (usually without recognition by the claimee) over all government statistics.<sup>1/</sup>

Although the discussions of 1956 in Seoul laid the ground for a Korea statistics project, progress toward its formulation was slow. An intervening jurisdictional question was removed at a luncheon conference in Washington among Messrs. Wood, Marquat, Clarkson Stevens (an advisor to General Marquat), and Rice. Which of the first two should take responsibility for statistical assistance to the ROK Government? In the opinion of all present, responsibility belonged to Mr. Wood's OEC. Some months later, negotiations were initiated by the International Cooperation

---

<sup>1/</sup> The Bureau's authorities were later enlarged by its transfer to the Economic Planning Board in the summer of 1961 and by the promulgation of the Statistics Law in January 1962.

Administration with Stuart Rice Associates, and on April 23, 1958, a contract was signed with that firm which a month earlier had been renamed Surveys & Research Corporation.

In its preamble the contract declared that the Government of the Republic of Korea "has requested the aid of the United States in providing technical assistance in the improvement of its national statistical program" and that "the Contractor is willing and able to assist the Government in this respect." Two statistical advisors and a secretary - administrative assistant were to be sent to Korea for approximately two years. L. Rice was to act as project manager, was to proceed to Korea for a preliminary survey, perform nine months of services in Washington and Korea, and be supported while in the field by Mr. Libert Ehrman, the contractor's vice president, in Washington. By later amendment, the title of Dr. Rice was changed to project director and Mr. Ehrman assumed more formal duties as assistant project director. The contract was to run for thirty months and the obligation of funds not exceeding \$150,000 was authorized.

## II

### OBJECTIVES AND "SERVICES TO BE PERFORMED"

The objectives of the contract were extremely broad and the services prescribed were numerous and detailed. Differences of judgment concerning program emphasis and changes in the direction of specific programs as work proceeded were inevitable. Even without the latitude given by the contract, they could scarcely be avoided within a society which underwent two political revolutions and experienced continuous social and economic instability during the contract period. Shifts in the power structure of the ROK Government and displacements of key officials became almost a pattern of normality to which adjustments of work under the contract were required. It was often essential for the contractor's field staff to provide a stability and continuity in statistical programs that were otherwise absent.

As its generalized objective the contract called for assistance to the ROK Government "in developing and implementing an improved statistics program covering organization, administration and operations." This phrasing was not altered in the course of seven successive amendments, most of which had only an incidental effect upon the scope of the work. Thus, Amendment No. 1 added the cost of certain premiums to the contractor's reimbursements; No. 2 authorized the addition of census and data processing advisors to the field staff and added some administrative provisions; No. 3 called upon the contractor for specifications and advice in the selection of census equipment, and again added administrative

provisions; No. 4 will be described presently; No. 5 transferred a program to train selected Koreans in data processing machine operations from a locus in the United States to Japan or the Philippines; No. 6 authorized assignment of the contract as collateral for borrowing working funds; and No. 7 pertained to certain administrative requirements.

Among the seven amendments, No. 4, entered into June 1, 1960, increased to \$1,072,210 the funds authorized for the project and extended its effective period to May 31, 1963. It codified all preceding contract provisions and is the document to which subsequent citations, including those in the present report, relate. The detailed statement in the original contract of "Services To Be Performed by the Contractor" underwent little change, but Amendment No. 4 greatly improved the contractor's capacities for performing them.

The fact that as the project developed little change was required in these specified "Services" was due to their comprehensiveness. They were enumerated in sixteen paragraphs in Article I. In total these were a catchall, permitting the contractor the widest latitude in selecting statistical activities or issues concerning which his detailed efforts seemed most likely to further general objectives. The first of the sixteen paragraphs read as follows:

"Survey the existing statistical activities of the Government to determine the adequacy of the types of data presently collected and to pinpoint deficiencies in coverage, timeliness, accuracy, methods, distribution and use of information. Among the types of statistical data to which consideration will be given are: population; vital statistics; public health and medical care; labor force; non-agricultural and agricultural employment; unemployment; wage



rates; productivity; industrial injuries; education, criminal and judicial statistics; agricultural, manufacturing, mineral production; distribution and service trades; wholesale and retail prices; prices paid and received by farmers; government finance; money and banking; financial reports on business; housing, transportation and utilities; foreign trade and shipping; balance of international payments; consumer income, expenditures, and savings; national income and product; natural resources."

The development of statistics concerning the preceding subjects, together with other services prescribed in the contract, have been in other countries a highly complex and extended historical process, both technical and administrative. In the United States it has occupied numerous well-staffed units within the Federal Government for more than a quarter-century.

In Korea, services by a few alien technicians within a limited period of time relating to all of the subject areas listed could only be superficial. Alien advisors would be handicapped by the absence of many elements of public understanding upon which good statistics depend; by customarily frequent turnovers of official personnel; by difficulties of communication; and by dimly understood differences of national culture and outlook stemming from a Korean history of more than 4,000 years. The problem confronting the contractor's field staff, then, was how, among the alternatives presented, to find areas within which their assistance would provide the best leverage for general statistical improvement.

Such an area was ready-made by the recommendation of the United Nations that all countries conduct censuses of population, housing, and agriculture in or near the decennial year 1960. The United Nations was South Korea's protector. An acceptance of its recommendations appealed

to the Republic's growing desire to be treated as a sovereign equal within the "family of nations." The proposed census appeared to Korean officials and the public to be an evidence of national maturity; a prelude, perhaps, to international recognition as a United Nations member.

There were also special obligations upon the contractor to advise upon census preparations. Implicit in the statistics contract, as indicated in the preceding chapter, was the need of the ROK Government and its American advisors for basic data of types that a census could provide. National planning and programming, especially in a predominantly agricultural nation, must take account of population in relation to resources.

In an address to the officers and staff of OEC in 1959, Mr. Libert Ehrman, assistant project director, pointed out that inaccuracies in current estimates of population and of agricultural production had potentially dangerous effects. On the one hand, underestimates of population and overestimates of food supplies could lead to hunger and unrest. In an opposite direction, statistical inaccuracies might result in excessive importations of food with unnecessary expenditures of public funds.

"Special assistance to the Government in the planning, development, conduct and processing of the 1960 Census in connection with its participation in the 1960 World Census ..." was prescribed in item 9 of the "Services To Be Performed by the Contractor."

Beyond the importance of the census for obtaining specific information was its value in furthering overall contract objectives.

Even better than in the form quoted in the second paragraph of this chapter, these objectives were epitomized in the sixth of the "Services To Be Performed." This called for the development of "such plans as may be necessary and practicable for improving or extending existing statistical services and their integration into a coherent national statistical system, coordinated in its parts and with an appropriate distribution of responsibilities among and within Government agencies." Without the "integration" of "existing statistical services" into a "coherent national statistical system," there could be no substantial and enduring improvement in statistical "organization, administration and operations."

As a means toward statistical integration in Korea censuses had high potentials. For example, they would provide unexcelled opportunities within the structure of government for training in statistical procedures. A cadre of personnel who had successfully experienced its variety of technical operations might become the nation's statistical leaders in after-years. The importance of training was emphasized in the contract by reference to it in no less than four of the sixteen paragraphs itemizing the "Services To Be Performed by the Contractor."

A census would provide opportunity to train Koreans in modern "methods of collecting, compiling, and tabulating data" ("Service" No. 2). It would help the contractor to "assist the Government in developing, supervising and administering programs for training statistical personnel with a view to increasing the technical proficiency and productivity of the agencies to which they are attached" ("Service" No. 7). It

would provide an obvious occasion to "examine the mechanical tabulating equipment requirements of the Government" ("Service" No. 5).

Among broader categories of "Services," few statistical enterprises would be as useful as a census "in creating an appreciation by the Korean public of the national needs for reliable information and public support for governmental efforts to secure accurate and timely statistical information" ("Service" No. 11), or to "elevate the prestige of statisticians and the statistical function and to inculcate in Korean personnel a high regard for the quality of information given to and compiled by the Government, and to emphasize the necessity for accurate data in formulating sound policies and effective programs in the public service" ("Service" No. 12).<sup>1/</sup>

Unforeseen reasons that compelled the contractor's field staff to give almost immediate attention to census plans and preparations are explained in Chapter V.

<sup>1/</sup> Of further though incidental value as a by-product of a census was the prospect of augmenting the technical services of the contractor with assistance from the United Nations. Its World Census Program contemplated visits and expert advice to participating governments from its own technical staff. The aid actually received at various times from several highly qualified members of the United Nations staff, working in close collaboration with the Statistical Advisory Group of Surveys & Research Corporation, proved to be very helpful.

### III

#### THE WORKING PARTY IN KOREA

The project director, Dr. Stuart A. Rice, arrived in Seoul on May 7, 1958, followed a few days later by Mr. Herbert O. Rogers and Dr. Lorand Dabasi-Schweng, statistical advisors, and Miss Mary Catherine Elward, secretary - administrative assistant. The group was first known as "the Statistics Mission," following the analogy of the statistics missions to Japan. It later was officially called the Statistical Advisory Group, or SAG. Its original members were obligated for two years of service. When the contract was enlarged and extended, new members of SAG filled vacancies and additional posts and were supplemented by short-term consultants. Appendix A lists the names, functions, and periods of service of all members of the field staff during the five-year life of the contract, April 23, 1958, to May 31, 1963.

The full complement of eight persons to fill positions specified in Amendment No. 4 was never actually reached, if transitional overlaps be disregarded. Delays in obtaining official "clearances" and approvals frequently impaired or canceled the availability of candidates. Moreover, a 1960 policy of retrenchment by USOM required the contractor to leave vacancies unfilled in two of the six professional positions that the contract specified.

During this period and until the end of the contract, however, a small staff of Koreans, paid by the ROK Government from counterpart funds as translators and interpreters, added substantially to SAG's

professional competence. The suave leader of this staff, Mr. Lee, Hee Seung, was highly valued for his wide knowledge of Korean affairs and for his mature and balanced judgments concerning them. Among other competent members of this staff, two university teachers of statistics, Professors Park, Hong Nai and Choi, Chi Hoon, were able to make technical contributions to SAG's work while supplementing their own professional training.

Before returning to Washington from his initial visit to Korea under the contract in the spring and summer of 1958, the project director designated Mr. Rogers as chief of party. Mr. Rogers was succeeded in that role in January 1960 by Mr. Charles B. Lawrence, Jr., who had joined the group early in 1959. Mr. Lawrence in turn was followed in December 1960 by Dr. Benjamin J. Tepping, who remained in charge of the field work until the termination of the contract. During an interval of several months between the conclusion of Mr. Lawrence's services and those of Dr. Tepping, the project director, prolonging a visit to Korea, served as acting chief of party. From the headquarters of Surveys & Research Corporation in Washington, eight supervisory trips in all were made to Korea -- six by the project director and two by the assistant project director.

Persons arriving on official business at Kimpo, Seoul's international airport, are traditionally given a cordial and ceremonious welcome. They are greeted by ROK and USOM representatives, whose rank denotes the importance of the arrivees as locally appraised. The bestowal of flowers, the taking of pictures, and interviews by the press are additional indexes of the significance attached to the event.

All of these evidences of interest and high official approval were encountered on the first arrival of the project director and original SAG members in 1958, and continued to appear, even though with some anticipated diminution, on similar subsequent occasions. The substantial continuity in the character of these ritualistic observances seems noteworthy. They took place against a background of violent change within the Korean Government. This change is symbolized in the recollections of the writer by an enormous red band surrounding an immense bouquet presented on an early visit. Imprinted upon this was a felicitous welcome from the Minister of Home Affairs. A few months later the Minister was executed by a successor government which was equally assertive of cordiality toward the statistics project.

The project director's arrival at Kimpo Airport in 1958 was accompanied by apologies for the inability of the ROK Government to house its new advisors with its Bureau of Statistics. The Bureau's quarters near the Old Capitol Building were suggestive of wartime "temporaries" in Washington, but more dilapidated and overcrowded. This was a stroke of luck. The apologies evidenced an assumption that the statistics advisors were to be counterparts of Bureau of Statistics officials (see Chapter I). The necessity of giving them separate quarters promised some time in which to establish in practice their wider responsibilities.

The group was installed in two rooms on the top floor of a four-story structure in downtown Seoul, occupied on lower floors by the Korean Information Service. Office furniture was in place. A requisition for

typewriters produced some ancient machines from the OEC warehouse that made carbon copies without originals. A day or two following occupancy a caterer arrived with a tablecloth for the low Korean conference table upon which he placed a huge cake and other delicacies. These heralded the arrival of the top echelon of the Bureau of Statistics for its official welcome and inauguration of its counterparts.

Another symbol of counterpart relationships was unobtrusive. A tiny non-English-speaking Korean schoolgirl lingered about the office at odd hours. She was identified by the advisors to each other as "Susie," but her function was mysterious until it was found that she had been employed by the Bureau of Statistics to dust and be helpful.

Of great practical importance in this early period was the assignment to the group by OEC of one of its most skilled interpreters, the youthful Mr. Cho, Lee Jay, promptly known as "Joseph." Mr. Cho's wide reading or personal acquaintance with Western as well as Korean affairs and personalities, his perception of the subtleties of Korean and American relationships, and his exceptional linguistic abilities, made him invaluable in a multitude of situations.

The initial discomforts for the group of their assigned quarters, especially the lack of functioning toilets and running water, were supplemented during the summer rains by leaking roofs; and during the following winter by the difficulties of working in unheated offices. The last were alleviated by oil burning stoves, though at the cost -- since external outlets for the residual gas were lacking -- of respiratory discomfort. Nevertheless, with many reminders about them of the greater discomforts endured by the surviving and returning



population of Seoul at the end of the Korean War, only a few years earlier, complaints were avoided and were limited to remediable situations.

When the group became larger more space was essential. Two successive moves to other downtown locations were made. One took the group into the relatively comfortable Korea Building, a rented structure to which the Bureau of Statistics also moved. By that time the separate and independent identity of the SAG had been better established. The final move of SAG, also in company with the Bureau of Statistics, was to the just-completed building of the Korean Data Processing Center, in the planning of which SAG had collaborated. There it occupied some of the rooms designed for the use of agencies other than the Bureau of Statistics itself; since, although under the Bureau's control, the building was conceived as a governmentwide utility, for the use of all government agencies which had data processing requirements.

From the beginning of work, members of the SAG and their dependents were encouraged as a matter of contractor policy to identify themselves with the Korean community whenever they could do so in ways which were natural and unstrained. "Compounditis," for which American personnel living abroad are so often criticized, was to be avoided. With very few exceptions, this policy has been followed by field staff personnel with satisfaction from the enriching experiences that it has brought them.

In keeping with the contract injunction ("Service" No. 11) to "assist in creating an appreciation by the Korean public of the national

needs for reliable information and public support for governmental efforts to secure accurate and timely statistical information," all members of the field staff, including the project director and assistant project director while in Korea, have taken advantage of many opportunities to address Korean audiences. A partial list of these occasions, with speaker and topic, is presented in Appendix B. Among the first, considerable attention was drawn to OEC Technical Lecture No. 8 on "Statistical Development in Korea," presented in the Seoul Chamber of Commerce Building on July 15, 1958, by Stuart A. Rice.

It is doubtful, however, whether headlined addresses have been as influential in the cultivation of good will toward the project and an understanding of its objectives as the informal contacts between individual members of the group and individuals of the host country. Facility in the use of the Korean language was highly valued and eagerly sought by the first, as was practice in English by the second. At a time when the group had reached its maximum size, all of its members, or members of their families, or both, were taking lessons in the Korean language. The ability of Miss Norma Collier, SAG secretary - administrative assistant, to make speeches in Korean enhanced the already great esteem in which she was held in the Korean community and rubbed off on her associates. The services contributed by Dr. and Mrs. Tepping as members of the Seoul Municipal Orchestra were regarded with high favor by a musically accomplished and music loving people.

Such activities occupied the leisure time of group members and undoubtedly contributed during working hours to a continuous succession of visitors from statistical offices of the ROK Government, from universities, and from other organizations, seeking advice about technical questions confronting them.

In most cases it was felt important to give these requests sympathetic attention. They sometimes led to the incorporation of advice or recommendations in formal communications. More frequently, the assistance given remained on an oral level. If a complete account of the advisory assistance in statistics given to the ROK Government through its employees could be given, the instances of oral and unrecorded advice would lead all others. The group's published reports would also be overshadowed in number by the numbers of letters and memoranda containing SAG recommendations.

A partial and selected list of published and unpublished documents of these various kinds which had the primary purpose of advising or assisting the ROK Government, and were prepared with some degree of formality, appears in Appendix C.

In addition to personal consultations of informal types, the group's activities took many forms. They included: systematic inquiry into the procedures of particular agencies in obtaining particular data; comparisons between the data of different agencies to assess their comparability and the reasons for discrepancies; inquiries into the uses made of various statistics; conferences on such matters with Korean officials; participation in meetings arranged by Korean statistical

offices upon problems confronting them; consultation upon machine processing of data and informal supervision of operations; organization of inter-agency committees upon questions of common interest, providing guidance and leadership as necessary; assisting ROK officials in preparing statistical organization charts, plans for buildings to house statistical operations and machine installations; organization of lectures and courses of instruction on such topics as sampling and data processing; assistance to the ROK or USOM in selection of candidates for overseas training in statistics; attendance at ceremonial or social occasions by ROK or USOM invitation; participation in USOM staff meetings and other official gatherings; staff discussion within the SAG itself to formulate preferred lines of procedure or technical recommendations; accompanying ROK officials to the field for statistical inquiries or training purposes; advising USOM officials upon statistical questions when requested, so far as compatible with other duties.

Such activities as these have made up the daily work of SAG members. They underlie the accomplishments for which credit may be taken.

IV

KOREAN STATISTICS WHEN SAG BEGAN WORK

The state of Korean statistics as first encountered by the Statistical Advisory Group was reviewed in its first report of May 29, 1958. This characterized statistical activities and data as "suffering from faulty organization, duplication of effort, inaccess to sources of information, political interference, lack of machinery for coordination, inadequate budgetary support, scarcity of trained personnel, low salaries, poor working space and equipment, the absence of confidentiality in the treatment of data reported (resulting in the penalization of accuracy), and low public esteem for statistics and statisticians."

In a visit to Korea in the spring of 1959, Mr. Ehrman noted especially<sup>1/</sup> the "inadequacy of data processing, lack of facilities fit for habitation by the statistical offices, and the extremely poor management of statistical operations.... The statistical functions of the Ministry of Home Affairs were to be found at the lowest rung in the status ladder. The field attracted none of the capable people in the Government; its personnel were underpaid; few incentives existed for improvements in management and coordination."

Similar deficiencies could probably be found in most countries which are still classified as underdeveloped. They reflect inconsistencies not uncommon among nations with authoritarian traditions whose popular

---

<sup>1/</sup> As cited in a letter of August 25, 1961, to Mr. Henry Shavell, then in charge of the Program and Economic Policy Division of USOM.

thinking is still on a pre-scientific level. Such people often give "lip service" to "advanced" institutional forms and processes such as representative government, scientific method, or statistics. They have been told that these are important for economic and social development, but they have no actual understanding of the meanings, requirements, or uses of these elements. In this context, the rationale for statistical activity takes on the character of magical thinking; its practice becomes ritualistic.

That Korea should exemplify such characteristics is not surprising in view of the tutelage under which its statistical practices were learned. Our inquiries in both Seoul and Tokyo concerning the Japanese impact on Korean statistics have not produced specific information. However, there is no doubt that Japanese directors and supervisors made little effort to help Korean subordinates to understand their work or the technical conceptions involved in it. When the Japanese directors of statistical work left, their Korean subordinates, in effect, remained on the job, continuing their previous motions without knowing the reasons for them. They were thus in no position to imbue their countrymen with a sense of the importance either of their products or their own functions as statisticians. Still, "everyone" knew that statistics, even if not statisticians, were "important" -- though not important enough to discover why, or how to improve them.

Any censure of the Japanese tutors in this connection would be almost as unfair as censure of the Korean pupils who succeeded to their responsibilities. It is not unlikely that the first, with their habits

of imitation of the West, were almost as lacking in understanding of the purposes behind their statistical activities as were the second. The following portions of the Summary Report of the first Statistical Mission to Japan, entitled Modernization of Japanese Statistics

(April 1947) could be applied to both countries, as here indicated:

"There is much evidence that statistics and statisticians in the past have been held in relatively low esteem by the Japanese /Koreans/. The purposes and uses of statistics were not generally understood, and the motives for collecting them were often superficial or ritualistic. At such times statistics became an expression of deference to Western science to which little practical value was attributed. During the war many statistics, whose accuracy was questionable at best, were further distorted by the regime for purposes of propaganda.

"... it is probable that the general quality of Japanese /Korean/ statistics has never been high.... Many of the statistics supplied the Allied Powers have been inaccurate. Information on many problems of critical importance to the Japanese /Korean/ people has been entirely lacking.

"The low quality of Japanese /Korean/ statistics seems due chiefly to a national deficiency in 'statistical mindedness.' Responsible officials and the people alike apparently do not understand the need for accurate information. They do not demand ... 'to have the facts' about matters on which decisions and policies are being made."

Japan's statistical development in the last decade and a half provides a brilliant chapter in its postwar record of recovery and advance. Korea's progress in the same field has started later from lower levels. Nevertheless, it can receive from its larger neighbor not only the encouragement drawn from an inspiring example but many forms of practical assistance. In the development of Korea's statistical administration, the growth of a statistical profession, and the application of such modern techniques as inter-industry relations

analysis, Japanese statisticians and statistical agencies have already provided valuable supplements to the efforts of the Statistical Advisory Group in Korea.<sup>1/</sup>

A second underlying cause of Korea's poor statistics was its dependence for the collection of survey-type information upon the channels of communication that traditionally tied together its hierarchical system of government. Questions formulated in a national ministry were sent to each of the ten provincial governments. Here they were reproduced and passed downward through each successive layer of government to the smallest units, the officials of which assembled the requested information in ways best suiting their judgment and convenience. Compilations and recompilations of these data were then passed back through the same channels to Seoul, where any opportunity to detect errors and appraise the accuracy of the figures was absent.

---

<sup>1/</sup> Surveys & Research Corporation has advocated the utilization wherever possible of Japanese and other nearby facilities for training Korean personnel as an alternative to sending them to the United States. On behalf of this policy, it has pointed to the lesser costs and to the value of training in environments similar to those in which the trainees will work in their own country. In the case of Japan there is the added advantage that Koreans of middle age and older customarily are familiar with the Japanese language. A contract "service" (No. 15) calling for the contractor to arrange training in the United States for eight Korean technicians for three months "in methods of wiring and in data processing machine operation" was amended at the contractor's initiative to provide for such training in Japan or the Philippines. Instead of eight trainees for three months in the United States, twenty-six were sent to Tokyo for six weeks with results which are believed to have been of at least equal value.



A SAG report of November 21, 1960<sup>1/</sup> asserted:

"Habits of statistical compilation and graphic presentation are deeply rooted in Korean governmental administration, but they are largely the work of untrained personnel and are often unaccompanied by understanding of the uses of statistics. Literally hundreds of statistical reports may be demanded of the officials of a single myon in a single year, precluding any likelihood of usefulness from many of them. For those at higher official levels who demand these reports they tend to be ritualistic, the source of colored diagrams to impress visitors. For those who prepare the reports their preparation is often regarded as a routine and onerous task, to be completed in the easiest possible way with a minimum of effort. Conscientious officials may have faith that the collection of statistics is in some way useful; perhaps as a magical rite, unrelated to the real world of cause and effect."

With Korea's statistical problems rooted so deeply in the sources of its national data, the project director wished at the outset to observe some of these at close hand. He decided upon a field trip to the southern provinces of Kyongsang Pukto and Kyongsang Namdo during the week of June 2 - 7, 1958. In its purposes and modes of travel the trip was said by OEC to be without precedent and it required considerable cutting of red tape, in which the assistance of Mr. Frank G. O'Neill, Deputy Chief of OEC's Public Administration Division, was invaluable. Dr. Rice was accompanied by interpreter Cho, who carried and disbursed an armful of bundles of 100 hwan notes (the largest denomination then issued and each worth a few cents); by Deputy Director Chang, Yun Suk of the Bureau of Statistics, the oldest in point of service of its responsible officials; and for a portion of the time by Mr. Lee, Chi Wu of that bureau.

---

<sup>1/</sup> Better Statistics in Korea, page 11. This was the first of the seven published "interim" bilingual reports to the Government of the Republic of Korea mentioned above in the preface. Among the forty-three units of the ROK Government legally empowered to collect statistics, as reported by SAG in January 1960 and listed in the appendix of the publication cited, pages 45-49, some collect information of nonsurvey types to which the present description would not apply.

The purpose of the trip was to learn "at the grass roots" how information requested by ministerial offices in Seoul was actually obtained and channeled back to them. This required interviews at each "level" of government with officials through whose hands ministerial requests for information passed "downward" to the points of data collection; then talks with those who made or controlled the collection; finally, a pursuit of the routes by which compilations and recompilations of the data reached the point of survey origin in Seoul.

The initial naive assumption that interviews and observations of the required character could be made without warning in advance of intended visits to officials concerned had soon to be abandoned, though it was realized in a few minor instances. In general, the Ministry of Home Affairs, with its firm control over provincial and local governments, its political responsibilities to maintain the existing regime in power, and an all-seeing eye upon everything that transpired in the nation, made all arrangements. Within the limitations of its friendly solicitude, a reasonably representative roster of officials in the two provinces was interviewed. The list extended from their very hospitable governors, through mayors and other chief officers of shis, eup, guns, and myons, to the chiefs of a village li and an urban dong.

Notes taken during the week were amplified in a thirty-seven page report distributed in Korea and Washington. The trip brought to light much useful information concerning Korean statistical procedures, especially at the points of initial collection and tabulation, and disclosed numerous points of particular weakness. The "highlights, points of interest and tentative conclusions" of the report have been

modified by later, less hurried inquiry, directed at more limited and specific questions of statistical collection. They were probably of less importance than the precedent that was established for "grass roots" investigation and field observation by members of the SAG.<sup>1/</sup>

Among the eighteen findings and conclusions of the report, the first may be mentioned: "Data reporting at local levels must utilize the existing structure of administration and control within ward and dong offices in the cities and by gun, myon and li officers in rural areas. Any national agency for administering a population or agricultural census or obtaining vital statistics must use the mechanisms that are now lodged within the Ministry of Home Affairs."

This conclusion was sharply at variance with the project director's earlier hope for centralized control over nationwide censuses. It may to some extent have reflected an influence upon his observations and opinions subtly achieved by the official apparatus that took charge of his tour. Future events, on the other hand, seemed to support the necessity of at least a compromise with the traditional administrative system. At the time it was reached the conclusion took account, realistically, of the tenacity of a system of intragovernmental relationships that seemed unlikely to be modified in the interests of improved census administration. Appraisals of the censuses when taken more than two years later provided much reason to believe that "the existing structure

---

<sup>1/</sup> During seven visits to Korea the project director eventually visited all ten of the provinces which, including the Special City of Seoul, make up the Republic. Most of the later trips were made at personal expense under arrangements by the Royal Asiatic Society.

of administration and control" at local levels was actually the heart of census organization and administration, in spite of restrictions theoretically placed upon them.

Another early field trip may be recorded here along with the first. In July 1958, the group's efforts to perform one of the broader contract "services" provided also an opportunity for an unannounced visit to an important gun office.

The occasion was a week's seminar in administration at Onyang Hot Springs for a number of Korea's foremost business leaders, arranged by the Public Administration Division of OEC. The session for one full day was allotted to SAG for discussion of the uses of governmental statistics by business and the importance of good statistics to the business world. Prepared papers with Korean translations were presented as follows: "Practical Application of Statistics in Modern Business," by Herbert O. Rogers; "Government Statistics and Business," by Lorand Dabasi-Schweng; and "Cooperation between Business and Government in Statistics," by Stuart A. Rice.

The return to Seoul by highway permitted an unannounced afternoon stopover of some two hours at the office of a heavily populated gun midway between Onyang and Seoul. Gun officials appeared for the most part to be on the job. Their answers to questions asked were generally consistent with those obtained a month earlier on the trip by the project director to southern provinces.

On a large number of subsequent occasions, visits were made by SAG members to shi and eup, and especially to gun, myon, ku, and dong offices,

in connection with preparations for field work on the censuses; but seldom if ever again without some prior advance arrangement.

## THE CENSUSES DEMAND ATTENTION

The analysis of contract objectives and the best means of serving them, described in Chapter II, were not the precipitating factors in what became a high concentration of attention by the Statistical Advisory Group upon census problems. The subject was thrust upon them at an early date.

The original members of the group had been in Seoul for only a few weeks during the summer of 1958 when they received emissaries from the Bank of Korea, carrying copies of voluminous plans for an agriculture census, to be taken by the Bank at the request of the Ministry of Agriculture and Forestry. These plans had been in preparation for about a year. Nothing was known of them by the Bureau of Statistics in the Ministry of Home Affairs, which had legal responsibilities for census taking and was desultorily anticipating their exercise.

It was then discovered that the Ministry of Health and Social Affairs, with less thoroughness than the Bank and without the knowledge or assent of other ministries, was making preparations for a census of housing. Apart from the somewhat ambiguous relations between the Ministry of Agriculture and Forestry and the Bank of Korea, there was no evidence of interministerial knowledge or responsibility regarding these various census anticipations and preparations. Nor were there arrangements of any kind for their coordination. The situation presented major issues that could not be escaped.

How could three separate sets of plans and anticipations for national census taking be reconciled? When the Bureau of Statistics was informed by the Statistical Advisory Group of the Bank of Korea's preparations for an agriculture census, the Bureau despatched low ranking personnel to the Bank to obtain information about them. Information was refused. For this refusal the Bank had plausible reasons: the Bureau's status within the government and in the public eye was low, and it feared the results if the Bureau should gain control of the agriculture census. In addition, the Bank felt, the Bureau should have sent representatives of higher rank.

As to the population census which the Bureau expected itself to take, it appeared unaware of needs for advance preparations. Presumably it planned to employ the traditional methods of conducting nationwide inquiries, described above on page 24.

In its first consideration of the problem of coordination among census plans, it seemed to the Statistical Advisory Group that a single census embracing population, housing, and agriculture was required; and a recommendation to this effect was discussed with various ministers and ministerial officials. The recommendation was withdrawn when it became apparent that the price of a single census administration would be the abandonment of the progressive plan for central direction of the agriculture census inherent in the program of the Bank of Korea. The loss, it was felt, would more than counterbalance any gains. Moreover, the consolidation of effort that supposedly would result from a single census was not assured. The indicated alternative to a combined census

was the creation of means whereby separate census inquiries could be made consistent with and supplementary to each other.

Meetings between the project director and the Council of Ministers and various ministerial officials led to the creation of the Census Council, an interministerial body for which Korean governmental traditions provided little if any precedent. With the Minister of Home Affairs serving as Council Chairman, a staff was created under the direction of Dr. "Ken" Tchah, an American-trained economist who held important functions of program planning in the Ministry of Reconstruction. The task of this staff was to coordinate the separate census activities at a working level.

The Council was avowedly created in the hope that it might survive, following completion of the census program, as an agency of coordination for all statistical activities of the ROK Government. Amendment No. 4 of the ICA contract, in a change of wording, provided that the contractor's "services" should be performed "in cooperation with the Korean Census Council and other agencies" of the ROK Government.

However, built-in defects of organization, reluctantly accepted by the advising statisticians as beyond their control, soon disclosed an inevitable failure of the new body in its primary purposes. Though supposedly interministerial, the Council was located within the Ministry of Home Affairs, the most political of all the ministries, which housed in its organization the Bureau of Statistics. The conception of an interministerial staff, headed by an executive officer from another ministry, was alien to Korean viewpoints. Members of the Council other



than its Chairman made no effort to share in Council decisions, and the post of Executive Secretary was presently seized by the Director of the Bureau of Statistics under the sanction of a presidential decree that amended the Council's organization. The change gave him two budgets and payrolls, and a shadow authority that added a little to the authority he had previously possessed.

Following the Military Revolution in May 1961, it became apparent that the Census Council had become an impediment rather than an aid to furtherance of census objectives, and consistent with a recommendation of the Statistical Advisory Group it was abolished.

By the time of the creation of the Census Council, and in large part because of the inescapable direction of attention toward census preparations by the Statistical Advisory Group, these had become the chief preoccupation in the statistics field of the ROK Government, the contractor, and the USOM itself. Mr. Ehrman's 1959 address to the OEC staff, mentioned in Chapter II (page 10), dealt mainly with the population, housing, and agriculture censuses -- an emphasis which was generally approved by his audience. Preparations for these censuses were by that time actively under way by all agencies concerned. Responding in part to the Advisory Group's hopes for improved organization, the population and housing inquiries were combined under the Bureau of Statistics, but responsibility for the agriculture census was returned from the Bank of Korea to the Ministry of Agriculture and Forestry.

The zigzag record of census preparations during subsequent months is partially set forth in sections of Chapter VI. Changes in the ROK

Government resulting from the "Student Revolution" of April 1960 brought to positions of official responsibility for the censuses persons who lacked familiarity with their origins, purposes, or concepts. During his seven months in Korea in that year, the project director called upon seven successive Ministers of Home Affairs in their ex officio capacities as Chairmen of the Census Council. It is doubtful if any of them were very much aware, either before or after his call, of the responsibilities of the position.

Subordinate personnel of the Ministry of Agriculture and Forestry insisted upon the necessity of a two-month interval between the population-housing and agriculture censuses. In the absence of competent overriding authority, the interval was conceded, together with postponement of the dates scheduled for both. The succession of delays in constructing a data processing building for census operations following the enumerations is described in a section of Chapter VI.

Nor were the administrative changes affecting the censuses and the work of SAG regarding them entirely within the ROK Government. USOM's internal responsibilities for the statistics project were transferred from its Public Administration to its Program and Economic Policy Division. This change accompanied increasing attention on both sides of the aid relationship to economic planning. USOM was deeply concerned with a number of statistical questions not directly related to the censuses. As time went on it became the view of one USOM official that the censuses had become an obstacle to a needed reorientation of interest -- "the tail wagging the dog." The basic need, in his view, was to improve

ROK capabilities to obtain economic statistics of narrower scope, upon such subjects as gross national product, labor force, balance of payments, inventories, capital formation, and foreign trade.

A suggested solution was to assign each member of the Statistical Advisory Group to a ministry or other agency of the government so that it would be working in many more statistics fields. This suggestion harked back to the discarded conception of "counterparts." It was strenuously opposed by the contractor and his staff on the ground that it would destroy the staff's effectiveness as a group, within which functional division of labor was attempted and which, when held together, had exhibited a capacity to exert an influence that would be lost by its fragmentation.

Representatives of the contractor reiterated their belief in the social and economic importance of reliable census information and insisted that the investment of funds and effort already made in the census required that it be "seen through to completion." This view was supported by ICA officials in Washington. At the same time, the contractor pointed to numerous instances of advice and assistance under the contract to the improvement of economic statistics, starting at the very outset of the work, together with expectations of further effort in this direction.

Admittedly, some of these expectations had been disappointed, partly because of instabilities in the ROK Government. Thus, at one time, following the "May Revolution" of 1961, the Bureau of Statistics was left without a Director, Acting Director, or Deputy Director and

retained only one of its four section chiefs. In circumstances such as these, the Statistical Advisory Group had provided whatever continuity and stability remained in the work of the agency. Disappointments were also due, in part, to the cutback in authorized field staff (see page 13).

These honest differences in the appraisal of contract objectives and responsibilities tended to evaporate as the work and problems of the Statistical Advisory Group became better understood. The censuses were carried through to a creditable near-completion at the time the contract expired; and simultaneously intensive attention was given to such areas of economic statistics as foreign trade, prices, industrial production, classification of industries and commodities, labor force, employment, unemployment, gross national product, and "input-output" or inter-industry relations. In addition, much time was devoted to proposals for sample surveys and instruction of Korean personnel in the methods thereof.

Some of the progress made in these various directions is described in Chapter VIII.

VI

THE KOREAN DATA PROCESSING CENTER

The data processing facilities of the Bureau of Statistics, Korea's analogue of the United States Bureau of the Census, were inspected by the first members of the contractor's field staff shortly after their arrival in Seoul. They saw unforgettable congestion and disorder. A Quonset hut was piled high with survey schedules. In front of and intermingled with them were antiquated and broken-down data processing machines. Some were apparently left over from the Japanese period and only two or three appeared relatively recent and in working order. The "repair shop" in the rear was equipped with simple hand tools of hammer and screwdriver variety.

It was clear that neither these facilities nor the abacus -- still in general use for statistical tabulations and calculations -- would be adequate for processing the returns of a national census. In compliance with a "service" under the contract (No. 5), an American expert in data processing equipment, Mr. Sidney Binder of National Analysts, Inc., was engaged as a consultant and sent to Korea to review the problem. His report<sup>1/</sup> included a comprehensive evaluation of the existing equipment available to the ROK Government, its methods and management; estimates

---

<sup>1/</sup> "Data Processing Equipment Needs of the Government of the Republic of Korea," A Report to the Census Council by Surveys & Research Corporation, Statistical Advisory Group, May 11, 1959; 33 pages with 7 attachments.

of machine needs for the proposed censuses; alternative means of satisfying these needs (including, for example, processing abroad); recommendations concerning machines, other equipment, training, technical assistance, and space requirements; together with extensive cost estimates. Mr. Binder recommended the purchase and/or rental of "modern punched card processing units of the International Business Machines Corporation."

In keeping with Mr. Binder's reasoning, rentals came to be generally preferred by SAG and USOM because they would include maintenance, because needs for machines would presumably decline following the census, and because "it appears unwise to limit the growing national statistical system to any present type of equipment."

IBM machines were believed by Mr. Binder to be "the most efficient of available punched card systems for census work." The principal operating unit would be composed of five multi-purpose statistical tabulating and sorting machines, "for which there is no direct counterpart for speed, accuracy and efficiency in equipment of any other manufacture." Other machines included in the system would be 76 punches, 45 verifiers, 16 sorters, 3 accumulating tabulators, 8 reproducers, 2 collators, and 8 summary punching machines. Mr. Binder believed that such a system would represent the greatest advance in data processing technology that the Republic of Korea would be able to utilize effectively at its then existing stage of development.

In addition to training in the operation of such equipment, Mr. Binder stressed the space requirements that would be needed for its operation. "Characteristics of this space must include structural strength for heavy

equipment, adequate electrical wiring, and appropriate levels of cleanliness, humidity, and temperature," together with satisfactory illumination and other facilities for a working staff of approximately 400 people. No existing space available to the ROK Government met these specifications, and the erection of a new building for data processing seemed the only solution.

Agreements between ROK and USOM officials that made possible a formal project agreement and provision of the required dollars and counterpart funds for the purchase and rental of data processing equipment were not reached until March 1960. The following month witnessed the overturn of the Syngman Rhee Government in the so-called "April" or "Student Revolution." In June SAG reported that "all 1960 funds for census personnel, data processing equipment and construction have now been approved by both USOM and the ROK Government." The machine equipment began arriving in March 1961, but the census enumerations and still another revolution the military takeover in May of that year, were past history before a suitable place in which to use the equipment had been provided.

Until May 1960, the first census enumeration had been scheduled for the following October. For a variety of budgetary and administrative reasons and finally for reasons of expediency, this schedule was also deferred. During the second half of 1960 the SAG and Korean administrative officials impatiently awaited enactment by the General Assembly of a "local autonomy law" under which elections were certain to absorb public attention. Elections at the time of a census seemed equally certain to impair its completeness and accuracy. At best, electioneering and census

enumeration would be associated in the public mind, inasmuch as the same community leaders in a large proportion of cases would be involved in both. It was hoped that when the election dates had been determined, census enumerations could be rescheduled to avoid conflict.

Although the Ministry of Agriculture and Forestry had insisted upon a separate enumeration for the agriculture census (see Chapter V) and a two-month interval between the two censuses had been agreed upon, these arrangements became increasingly questionable. By September "continued inaction" on the local autonomy bill by the Assembly, in SAG's opinion, "made it increasingly evident that separate enumerations for population and housing and for agriculture could not be held in 1960." Trial censuses were conducted to test the feasibility of combining the two enumerations and these indicated that from technical standpoints no loss and even gain would result. Hence, SAG recommended to the Prime Minister that a joint census be scheduled for December 1, and that the elections be arranged to avoid conflict with that date. He thereupon announced that "the 1960 census" would be taken on December 1, without clarifying its scope.

Unyielding opposition by the Agriculture Ministry continued and agreement was painfully reached to keep the December 1 date for the population and housing census and set February 1, 1961, for the agriculture enumeration. The local autonomy bill was finally passed in early November. It called for the first of several local elections on December 12. By this time the census program had passed the point of no return and the schedule last agreed upon was maintained. Although many deficiencies



were subsequently found in the census enumerations, there is little evidence to indicate that these were specifically caused by or enhanced by the proximity of the elections, as had been feared.

Before census schedules began arriving from the field, it had long been evident that no acceptable place would be available in which to receive and process them. Delays in the construction of a "census" or "data processing building" had been persistent. Agreement upon a site for the building seemed unattainable.

In January 1960, a "site, plans and construction schedules" were being "reviewed" by SAG. In March "a number of prospective site locations ... were studied." In May, "with the release of counterpart funds for construction," the Minister of Home Affairs "initiated action" to secure approval of the construction site "that he has proposed." In June he announced that the site "is now available." In July "land for the new census building was formally made available." Agreement was reached on its general design. In August, architect's plans were drawn and reviewed. In October, invitations to bid on construction were announced. In November a "snag" was encountered in the form of two substantial concrete buildings hastily erected by squatters on the census building site. Legal action was being taken to evict them.<sup>1/</sup> At the beginning of January construction was proceeding "with completion

---

<sup>1/</sup>

At one time, as shown in photographs, workers were engaged in construction at one end of the larger building while simultaneously other workers were engaged in its demolition at the other end.

scheduled" for the following July 31. The building was finally occupied by the Bureau of Statistics in November 1961, more than a year after the time at which the censuses, as originally scheduled, should have completed field enumerations.<sup>1/</sup>

Members of SAG were invited to witness the filing and opening of bids by Korean firms for the construction of the data processing building and the award of a contract. These procedures seemed to offer another illustration of differences between Western and Oriental attitudes and conceptions. They are cited in SAG reports as "fantastic" from the standpoint of the first in respect to equity and guarantee of performance. They were described as conforming to Korean law and intended to prevent an award to either the lowest or the highest bidder. Apparently as a result, bids were concentrated around central if not identical figures. By an inscrutable process the selection of the successful bidder was said to result from "pure chance."

When the possibility of completing the data processing building in time to receive census schedules on their arrival in Seoul was seen to be nonexistent, a search for alternatives was for a long time fruitless. SAG felt compelled by circumstances to take initiatives in this and related matters that more properly belonged to ROK authorities. Choice lay between such initiatives and collapse of the census program. The absence of stable and competent authority at high levels was constantly illustrated.

---

<sup>1/</sup> The requirements for the building's construction and equipment, as Mr. Binder had specified them, provided many unusual problems. Thus, "adequate electrical wiring" presupposed a dependable supply of electric power that the city lines could not furnish and resort to specially installed generators became necessary.

Eventually the group arranged for minimum repairs in the east wing of the second floor of the Japanese-built Capitol Building, which had long remained in a bombed and burned-out state by decision of Syngman Rhee as a souvenir of enmities. Thus began a process of building renovation that continued during the next two years. Repairs for census purposes began in December 1960. Here, in early winter, minus plumbing and heating and with dim illumination, bundles of census schedules, held back for a time in gun offices, were received and checked. By February, editing of schedules in the same quarters had begun.

Data processing equipment, meanwhile, had also in part been held back from shipment. Repairs on the third floor of the Capitol Building to receive it reached the stage of specifications and cost estimates in February. In March "a substantial shipment" of the equipment arrived in Korea, but the space intended for its reception had not yet been prepared. In April it still awaited "the clearance of funds for the repair," and in May, the month of the military coup, the situation remained unchanged. On June 15, Mr. Fairley, data processing advisor in SAG, discovered a considerable quantity of this equipment in the open air on the docks at Inchon with some crates broken open. In the same month, funds were released for the Old Capitol Building repairs and a contract let for completion of the work by July 15. Meanwhile, as reported at the end of June, "nearly all of the equipment, both leased and purchased, is now in warehouse storage in Seoul."

In its May 1961 report, SAG notes that two weeks after the military coup, on May 31, the Bureau of Statistics was "moved to the west wing of the Old Capitol, by order of the Minister of Home Affairs. The space is quite unsuited to the purpose." Moreover, "the severe drop" in the morale of its staff was "particularly noticeable." By August the Bureau was "in a very bad state of disorganization," without a Director or Deputy Director and left with but one of its four section chiefs. The data processing equipment which had been in storage was moved approximately on schedule to the space prepared for it in the Old Capitol Building; but it cannot be surprising that most of the supervision over its use was supplied by personnel of the SAG and by representatives of IBM who came from Tokyo to assist in the installation. The equipment remained in the Old Capitol for less than half a year until its removal to the new building of the Data Processing Center.

When it had been completed and occupied, the Korean Data Processing Center immediately became a source of pride to the Korean Government and a showplace. To its statistical advisors a latent question immediately became acute: how far would these data processing facilities be available to all official agencies of the Republic and to other organizations? SAG had been partially successful in discouraging the use of the name "census building," which connoted a limited use, but the center was still identified in the public and official minds with a single bureau. "The right of access to the Center's facilities by other government agencies on a basis of equality with the Bureau of Statistics"<sup>1/</sup> has been a cardinal

---

<sup>1/</sup> Better Statistics in Korea, page 22.

element in the SAG's hope for the development of such interrelationships among Korean statistical agencies and their activities as would justify the use of the term "Korean Statistical System."

A progressive indication in this direction was the issuance by the Economic Planning Board in February 1963 of Ordinance No. 15 which governs the conditions under which the Bureau of Research and Statistics can provide data processing services for other agencies. The SAG has found this regulation less than satisfactory in a number of particulars, and at the request of the Bureau's Director has prepared recommendations to strengthen the facility as a mechanism of statistical coordination. Nevertheless, the rigid shell of bureaucratic monopoly over a utility which should serve "the government as a whole" has been broken. Rented equipment has already to a considerable degree been returned, but the ROK Government now has one of the best equipped data processing installations in the Far East, with a potential stimulus to overall statistical, economic, and general science development that should continue to be realized for years to come.

The maintenance hitherto given equipment at the Center by the IBM Corporation under rental arrangements is expiring with them, and Korean personnel have been sent to Tokyo for training in preparation for their assumption of maintenance responsibilities for the purchased machines that remain.

As the Korea statistics project comes to an end, negotiations are still in process among the American-Korean Foundation, Surveys & Research Corporation, the IBM World Trade Corporation, and the ROK Government concerning a proposal of the first two that the third contribute a 650

computer system to the Korean nation for exclusively educational and research purposes. According to the proposal, this new equipment would be installed in the Data Processing Center, where ancillary facilities would be available, but would not be used for routine statistical or administrative purposes. It would remain under Foundation control and provide a laboratory site for courses in data processing machine operations by Korean universities, as well as facilities for the furtherance of research projects, whether by faculty and students at these universities or by government agencies.

## VII

### CENSUSES ARE NEARING COMPLETION

It is doubtful if any country in modern times has completed a comprehensive national census program in the face of the vicissitudes which confronted the censuses of the Republic of Korea. Work on preparations and later work on data processing continued during three mutually hostile political regimes separated by two major and violent revolutions, each resulting in a well-nigh complete turnover in government administration. Continuity was provided largely by the Statistical Advisory Group of Surveys & Research Corporation, without which, if censuses had been undertaken at all, the results would probably never have become available. The Korea statistics project terminated on May 31, 1963, at which time the population and housing census of December 1, 1960, and the agriculture census of February 1, 1961, were near completion.

From the beginning of its work, the Statistical Advisory Group took the position that reliable census data provide the foundation for a sound statistical system. One of its earliest tasks in 1958, before the creation of the Census Council that it recommended, was to draft tentative plans for conducting population, housing, and agriculture censuses in 1960. This in itself was a departure from the tacit assumption of Korea's census taking agency, the Bureau of Statistics, that a census required little if any preparation. Fortunately, this view had not been held by the research staff of the Bank of Korea, and an

important motivation of SAG was to insure utilization of its plans for a census of agriculture, for which Korea had had no previous experience.

Following long negotiations, a presidential decree creating a Census Council was signed and became effective on February 10, 1959. Shortly before, SAG's chief of party, Mr. Rogers, reported that "even after the decree becomes effective it will be seriously handicapped by the fact that no budgetary provisions have been made for census activities in 1959, no office space has been provided for housing the secretariat, and no staff appointed."

"In order to provide the Council with some funds on which to operate" arrangements were made by SAG, in cooperation with the Public Administration Division of USOM, for the release to the Council of the equivalent of approximately \$180,000 in counterpart funds.

Early decisions reached by the Census Council and its secretariat in the spring of 1959 conformed in the main to SAG recommendations. It was agreed, as provisioned by the project director in his early field trip (pages 25-27 above), that the services of provincial government agencies must be utilized, at least in the census of population and housing, but with correction so far as possible of deficiencies in the traditional methods of enumeration by adequate training of enumerators. By the middle of 1959 the censuses were continuing to receive the "major share of the attention" of the SAG, and the drafting and review of questions for census schedules (a time consuming preliminary process) had progressed to the point that first field tests were being scheduled.



Census training film strips and accompanying recordings borrowed from the United States Bureau of the Census were translated into the Korean language and given preliminary showings to ROK and USOM officials.

During the following quarter, field work by Mr. Lawrence and Dr. Schweng in southern rural areas and in Seoul was pointed at the training of enumerators and at tests of preliminary census schedules. The annexation of the Census Council by the Ministry of Home Affairs (see page 84) and the repatriation of responsibility for the agriculture census by the Ministry of Agriculture and Forestry gave particular concern to SAG. In regard to the second, the Minister of Agriculture and Forestry and the Governors of the Bank of Korea and the Agricultural Bank gave SAG assurances of mutual cooperation.

These assurances became more specific later in the year with agreements reached upon an administrative structure for field operations, the selection of enumerators for the agriculture census who had acquired training and experience in the population and housing census, and the detail of personnel from the two banks for planning, training, and supervisory functions in the agriculture census.

In addition, the Ministers of Defense and Justice agreed with the Minister of Home Affairs on their respective roles in the collection of population data for special groups under their charge, such as military personnel and prisoners. A joint meeting of central government officials and personnel from provincial governments who would be responsible in the field was held in Seoul. The National Assembly approved a 1960 budget for census purposes of about 1.5 billion hwan, one third from regular funds and two thirds from counterpart sources.

During the first quarter of 1960, field tests continued, budgets and program were reexamined and revised, and training programs were put in operation. A sample post enumeration survey to test the quality and coverage of enumeration was designed, together with a punch card for the population and housing tabulations.

The disruptive effects of the Student Revolution in April 1960 upon the census program are not fully disclosed in SAG reports. They are reflected in (see Chapter VI) the almost interminable delays in the construction and occupancy of the data processing building.

SAG's four-month report on August 30 states laconically: "Each of the three ministries concerned with the 1960 census participated in the reshuffling of personnel which was an aftermath of the April Revolution. Since none of the new chiefs who were assigned to sections concerned with the census had any statistical experience, need for the advice of the Statistical Advisory Group has increased."

In retrospect it appears probable that paralyzing tensions had been building up within the ROK governmental mechanisms for some time prior to the April Revolution, unperceived to American observers. In any event, approval by the Combined Economic Board for the release of counterpart funds to cover census costs during the first half of the calendar year 1960 did not occur until late in May. Thus, fiscal stalemate supplemented political uncertainties. The almost agonizing recognition as the summer advanced that "the impending local elections would require a postponement of the population and housing census" has been related above (pages 39-40).

"Actually as viewed by SAG at the quarter's ending on November 30 of the census year the census program had been set back several months by the reorganizations and changes which followed the April Revolution, and, irrespective of the election issue, a deferment of the census date would probably have been necessary." However, "deferment ... beyond December 1 threatened to eliminate it the census entirely." With many of the essential requirements still unprovided, SAG announced in its November report, "the census will be taken on December 1 ... with the enumerators strictly enjoined against any form of political activity."

A variety of budget, fiscal, and space problems remained unresolved. SAG was called upon to approve a revision of the joint USOM - ROK census budget to release counterpart funds for the second half of 1960. In SAG's opinion, savings which resulted from deferred data processing machine funds and allocations for the printing of census schedules should be earmarked for temporary quarters pending completion of the data processing building, but the Bureau of Statistics absorbed these funds into its own operating budget to pay a sizable number of employees whose services were not needed. On a brighter side, the printing of schedules for the population and housing enumeration, 5.5 million in number, was satisfactorily completed in ten days by one of the larger printing companies in Seoul, thus vindicating the belief that they could be produced locally rather than in Japan or Hong Kong, as the contract permitted and as had originally been intended.

As public and official interest in the census mounted, suggestions which at any earlier stage would have been welcome tended to become troublesome. Thus, after the agriculture census schedule was in final form, the Minister of Agriculture and Forestry made promises to the General Assembly that an inquiry on the extent of farm indebtedness would be included in it. The desire for information which led to his promises was placated by the hastily devised SAG recommendation that the desired inquiry be appended as a supplement to a one-percent sample of farms. A sample plan and schedule were worked out in time to be included in the training of all agriculture census personnel.

A probable source of considerable error in Korean agricultural information was the fact that land areas had never been rechecked subsequent to measurements made by Japanese occupying authorities many years earlier. As part of the post enumeration survey, plans for a land measurement phase took form during the last weeks of 1960 together with efforts to find the necessary funds. Tests of the enumeration phase of this supplementary census were made early in the new year and the training of 120 enumerators for the purpose began on February 27, 1961, with enumeration to begin on March 5.

Once again census operations --- in this case the beginnings of the data processing -- were interrupted by a revolution. A SAG report of May 31 begins: "The military coup d'etat of May 16, 1961, has made it difficult to forecast the activities of the Statistical Advisory Group. Some activities begun before that date have definitely been abandoned, and the state of others is uncertain."

The post enumeration survey indicated that the quality of the census enumerations had been extremely variable. Redoing of some enumerations was indicated but was not attempted "because of the absence of funds." For the same reason the hoped-for objective land measurements could not be undertaken. Enumeration districts from the population and housing census were reviewed to determine the extent of non-response on each of the questionnaire items and a plan was adopted to return to the field those which were in greatest need of correction. This plan also was suspended "for lack of money for postage and envelopes." At the end of May, "almost 40 IBM machines, delivered in March, are still in their shipping crates awaiting the clearance of funds" for the repair of space for their temporary installation in the Old Capitol Building (see page 43).

As a consequence of delays in making space available and implementing a recruitment program, the training of clerks and punch operators for the census of population and housing did not begin until July. The subsequent recruitment schedule was also disrupted by administrative confusion in the Bureau of Statistics, so that the processing staff was completed only in September.

Once recruited, punch card operators and verifiers learned their jobs quickly and production rates were soon high with error rates low. In almost every other respect, however, the work was slovenly as a result of poor supervision and an apparent lack of a feeling of responsibility for the whole job on the part of the supervisory staff.

Failures in tabulation programs were traceable to simple problems of "housekeeping," which might have been cured by a degree of work discipline that did not exist in the tabulation section. Its newly appointed chief, to enjoy the dignity of his position, removed his own desk as far away as possible from the section's operations. At the end of 1961, "the continued discussions between the Statistical Advisory Group and the management of the Bureau of Statistics had resulted in no appreciable improvement."

Processing of the census of agriculture was extremely late in getting started. Specifications for editing, coding, and tabulating were slow in coming from the Ministry of Agriculture and Forestry, which was responsible for providing them. This failure arose principally from the instability of the research and statistics section in that Ministry, where there was frequent turnover of personnel, with responsibility for the census being passed from man to man, each of whom had to learn anew. Actual editing of the agriculture schedules did not begin until December 1961.

During much of the remaining seventeen months of the contract period, Messrs. Fairley and Israel were assigned practically full-time to the Bureau of Statistics, where they were compelled to compensate, so far as could be done within their advisory roles, for the Bureau's managerial deficiencies respecting data processing.

Early in 1962 it became clear that the Bureau of Statistics could not complete the planned tabulation program with the resources that had been allotted. At the beginning of that year, about 55 percent of the

punching on the population-housing census had been completed. Six months later the figure had been raised to 85 percent, with only 10 percent of the tabulations completed. Punching for the census of agriculture, beginning in January 1962, was about 50 percent completed at the end of June with tabulations barely begun. Governmental disorganization and delays in the installation of data processing machines were having their effects upon the production of a very perishable commodity -- statistical information.

At this time, the Statistical Advisory Group recommended the preparation of advanced small sample tabulations for both censuses; and the recommendation was accepted. The resulting publication of census data appeared approximately a year before the results of the more complete tabulations will be available.

In March 1962 the group proposed a curtailment in the main program of tabulation for the population and housing census. Under this curtailment many of the statistics would be based upon a 20-percent sample of the returns. This proposal was also accepted about a month later. With constant prodding and advice from Messrs. Fairley and Israel, the operations of the tabulation section of the Bureau of Statistics have gradually improved and the revised main schedule of census tabulations is expected to be completed for the population and

housing census in the summer of 1963 and for the agriculture census in the following fall or winter.<sup>1/</sup>

The sentiments of those who have been involved in the five-year struggle to organize and complete the basic statistical foundations for the Republic of Korea which censuses provide are analogous to those of sailors on a storm-wracked ship as it enters harbor mouth. No census yet taken at any time or place, including those of recent decades in the United States, has been without serious problems and deficiencies, best known to those responsible for their administration. These were greatly magnified in the first two censuses of a comprehensive and truly scientific character ever conducted by a government in Korea. Notwithstanding all of the tribulations by which they have been beset, and in spite of their defects, the final products promise to warrant the characterization "satisfactory." They will provide innumerable "base lines" and "bench marks" from which future economic development in the Republic of Korea can be charted and measured.

---

<sup>1/</sup> Readers should not assume that curtailment of the original plans for tabulations represented a major setback in the census program. More unfortunate than curtailment of some items to a 20-percent basis was the delay in completing and publishing important results. A selection of what is to be tabulated and cross-tabulated, perhaps on sample bases, is always necessary in a census. In this connection, a former chief statistician of the Population Division of the United States Bureau of the Census once estimated that only one fifth of the usable results of a census of population in this country is usually tabulated and made available to users.



VIII

SERVICES RELATED TO CURRENT STATISTICS<sup>1/</sup>

Korean statistics as figures are abundant; the agencies producing them numerous. SAG's interim report entitled Statistical Publications in Korea, published July 5, 1961, itemizes fifty-two periodic statistical reports issued by thirty-one governmental and quasi-governmental agencies. The Statistical Yearbook for 1961, published by the Bureau of Statistics, lists 447 tables upon such diverse topics as climate, population, military affairs, publication and translation of books, and many other geophysical, cultural, and economic subjects. No transient group of advisors could be cognizant of the characteristics, uses, merits, and deficiencies of more than a small portion of these reports and tables, or of the operations that have produced them.

In this chapter specific reference is made to a limited number of the more important statistical series with which the Statistical Advisory Group has been actively concerned, but the influence of SAG's work undoubtedly has extended much farther than the series mentioned will indicate.

---

<sup>1/</sup> Some of the material in this chapter repeats descriptions and appraisals of statistical series contained in a letter of April 30, 1962, from Stuart A. Rice to Mr. Seymour Janow, Assistant Administrator for the Far East of the Agency for International Development.

For example, SAG can claim large credit for the present general recognition of sampling as the quickest, most accurate, and least costly method of obtaining many types of information. Sample surveys are being planned in many quarters. Much of this recognition results from SAG's fourth publication, A Sample Survey Service in Korea, the work of its consultant Mr. J. Arnold King.

The improved execution of Korean sample surveys is due largely to the unrelenting insistence at every opportunity by Dr. Benjamin J. Tepping and Mr. Harold Israel that scientific standards in planning and conducting them and in analyzing their results must be observed. Their educational efforts in this respect have been in the Mark Hopkins tradition<sup>1/</sup> and have deeply affected the consciousness of many young Koreans who are inheriting statistical responsibilities from elder predecessors.

It is doubtful whether five years ago more than a handful of Koreans could have been found in the ROK Government who understood the meaning, let alone the importance, of such conceptions as sample design, selection of strata, or estimation of variance and errors.

Again, much improvement has apparently resulted from the adoption of recommendations made by Mr. James S. Fitzgerald, a consultant member of SAG, in its Statistical Publications in Korea; but the influence of this report undoubtedly will be wider than any record of adopted recommendations.

---

<sup>1/</sup> Hopkins on one end of the log, a student on the other.

Of the statistical series described below, several are produced by the Bank of Korea, a pseudo-governmental organization. The Bank has long been reputed as the most competent and reliable statistical organization in the country, producing series having special economic importance. Its economic data are derived for the most part by combining data originally compiled by other ROK organizations.

#### Index of Industrial Production

When the Statistical Advisory Group first arrived in Korea in 1958, responsibilities for current industrial production statistics were found primarily in the Ministry of Commerce and Industry. Methods of reporting were highly irregular. Some figures reached Seoul through the myon-gun-provincial channels already described (page 24). Others were obtained from industrial and trade organizations, usually without checks upon the completeness or consistency of the coverage of individual establishments. It was unclear how such figures from separate sources were combined. In August 1958, a series of meetings was held by the statistical advisors with section heads responsible for the collection and publication of industry figures. Recommendations were made for improvements in industry classification and groupings as well as table headings in publications. These recommendations were accepted and incorporated in subsequent publications.

In the same year the Bank of Korea began publication of its Monthly Index of Industrial Production. On August 28, Mr. Lee, In Kon of the Bank's research department, recently returned from training in the

United States as a "participant," called upon the statistical advisors to discuss the shortcomings of the industrial production statistics of the Ministry of Commerce and Industry and obtain advice concerning the index. Conferences with Bank personnel continued. During September a total of fourteen meetings was held with its representatives, and eleven meetings (including some of the fourteen) were held with various public agencies upon questions directly related to the improvement of the index and the data entering into it.

At the latest examination by Dr. Gabriel F. Cazell, economic statistics advisor of SAG, the index incorporated 149 commodity series, based mainly on physical production, weighted by value added as measured by the 1958 census of mining and manufacturing taken by the Korean Reconstruction Bank. Despite great improvement since 1958, but because of weaknesses in the industry classification and the arbitrary assignment to some commodities of weights derived from the entire two-digit categories with which they were classed, the weights at best were extreme approximations. This was largely beyond the direct control of the Bank. Moreover, the major sources of error were probably still in the commodity series themselves. Some series had been discontinued since the May 1961 Revolution and numerous important commodities were not represented at all. Much of Korean "manufacturing" -- perhaps one third -- consists of repairs, which were not directly represented in the index. Dr. Cazell believed that "too much economic activity in manufacturing is excluded for the index to reflect accurately industrial production."

Index of Wholesale Prices

In 1955 this index, previously confined by the Bank of Korea to the city of Seoul, was extended to other cities in which it has branch offices. It was enlarged in composition from forty-five to nearly 200 items. In August 1958, at the request of the research department of the Bank, the Statistical Advisory Group undertook a detailed examination of the methods used in developing the revised index. Its advice was sought particularly concerning a method of relating the new index, with its larger number of items but extending backward only to 1955, to the older index which went back to 1946. A comprehensive memorandum presenting the group's views and suggestions was prepared.

A SAG monograph by Dr. Cazell, The Korean Wholesale Price Index, was published on March 1, 1962. It points out that this important series is still basically a Seoul index. Prices are collected thrice monthly (for grains every five days) by six canvassers in Seoul and one from each Bank of Korea branch office. Weaknesses in weighting prices are analogous to those in weighting production, mentioned above. Changes in the prices of 200 items can scarcely be "representative" of general price movements. For example, the prices of preserved fish, which are included, cannot accurately represent the prices of fresh fish, which are excluded. All machinery, both electrical and nonelectrical, is "represented" by seven machines plus a few components. Selections of prices for inclusion depend largely on their availability. Seasonal items, some of great national importance but having little place in wholesale markets (for example, vegetables at kimchi making season), are omitted.

Prices quoted at the first stage of the wholesale market, when it exists, rather than prices actually paid by the retailer in a country accustomed to bargaining at all levels of distribution, result in "price statistics" which at best are of questionable accuracy or value for economic planning.

#### Index of Consumer Prices in Seoul

Several years of preparatory work by the Bank of Korea preceded the continuous monthly publication of this index since September 1957. More attention to the data utilized in compiling it has been given by the Statistical Advisory Group during the latter months of its service than at its beginning. As recently as March 1963 the sample for a family living survey, described in the next paragraph, was redesigned by the Bureau of Statistics with the group's assistance and may have value for the revision of weights in the consumer price index. In addition, the group has assisted the Bureau of Statistics to design specifications for a monthly sample survey of family expenditures which should have value for the same purpose.

The choice of commodities still rests essentially, however, upon a few small consumer expenditure surveys, the most important being for 200 middle-class families of above-average incomes in 1953-55. The weights, initially unrepresentative, had by 1962 become quite obsolete. For the country at large, food was undoubtedly underweighted at 48 percent, while such items as rent (11 percent) and clothing (13 percent) were undoubtedly overweighted with respect to the rural population. Most seasonal items, as with the wholesale price index, were omitted. Moreover, improbable stabilities among the prices reported, especially in

view of the universality of bargaining, cast doubt upon the techniques of collecting prices. Again, there seemed to be little adaptation to changes in consumer preferences.

#### The Family Living Survey

By mid-1962, this comparatively new and ambitious survey, mentioned in the paragraph above, covered eight quarters of published data for Seoul and two quarters for "all cities." It follows the general recommendations of the International Labor Office. It is based on the sophisticated scheme that total family receipts must equal total family disbursements. Its overcomplexity and elaboration of detail result in some errors of estimate which are probably of several hundred percent magnitude, since the number of families in some of the cells of the table may be as few as three to five. Data are collected by a part-time staff of college girls who leave with families "accounting diaries" for food expenditures and who require about one and one-half hours per interview. Dr. Cazell believed that some reliance could be put in the annual (but not the quarterly) figures as indicators of the average income of employed families in Seoul.

#### Foreign Trade Statistics

The gaps and inaccuracies in the data assembled on foreign trade were of concern to both governments from the outset of American economic assistance to Korea. In 1958 import data covered only commodities purchased with Korean foreign exchange and omitted all foreign aid goods. A SAG report at the end of 1958 noted the "active part" taken

by the Statistical Advisory Group "in bringing to the attention of the appropriate ROK authorities the deficiencies of the foreign trade statistics.... Arrangements have recently been made between the Bureau of Customs and the Bank of Korea for complete coverage in the future." Again, "the Customs Bureau has made the necessary arrangements for establishing an effective method of collecting data that will furnish a complete record of commodity imports by the ROK."

These predictions turned out to be unduly optimistic. It was not until nearly three years later, when a comprehensive program of foreign trade statistics had been developed by the SAG consultant Dr. J. Edward Ely, who was Chief of the Foreign Trade Division of the United States Bureau of the Census, that substantial improvement seemed actually in sight.

SAG's fifth published report, Korean Import and Export Statistics, contains Dr. Ely's findings and proposals and sets forth a comprehensive program which was designed to satisfy the basic needs for quick, accurate, and approximately complete foreign trade data. Mr. Scott V. Fairley, data processing advisor of SAG, assisted by planning a conversion from manual to punch card procedures.

Responsibilities for foreign trade data within the ROK Government had been mainly divided among the Bureau of Customs, the Bank of Korea, and the Ministry of Commerce and Industry. At an inter-agency meeting on November 16, 1961, to take action on Dr. Ely's recommendations, it was agreed that the Bank of Korea should provide overall direction of an import and export statistics program. This promised to give effect



to Dr. Ely's first recommendation that authorities and responsibilities for the program be centralized.

Other needs to which the Ely report pointed included: (2) Improv coverage of import statistics (e.g., imports by the ROK Office of Supply had not been included in trade statistics); (3) Separate data on imports under various programs (e.g., development projects, the exchange control program, various aid programs); (4) A commodity classification system in conformity with international classification; (5) Use of punch card procedures for tabulation; (6) Speedier import coverage (statistics frequently included goods which actually arrived in earlier periods).

Unfortunately, the failure of the Ministry of Commerce and Industry to continue its cooperation before the plan was perfected halted its development and led later to a transfer of responsibility from the Bank of Korea to the Statistical Council, newly established by the Economic Planning Board under the Statistics Law. Here the program's further development is a responsibility of a subcommittee. Although not yet operational, the essentials of Dr. Ely's plan have remained intact. The hope seems justified that further time will bring its effectuation.

#### Gross National Product

Little if any time was devoted by the Statistical Advisory Group to an examination of the validity of estimates by the Bank of Korea of the Republic's gross national product until the arrival on its staff of Dr. Cazell on June 16, 1961. He promptly began a study -- in

most cases a restudy -- of the Bank's economic series. This resulted in a mimeographed but never published Report on Economic Indicators in Korea.

In February and March 1962, Dr. Cazell examined the Bank's methods of compiling gross national income figures, including an investigation of the reliability of data sources, imputation techniques, methodology for the adjustment of income totals for each economic sector and methods for the distribution of income. From these he later proceeded to an analysis of national account worksheets.

Dr. Cazell's report on gross national product went through a number of drafts, the last completed in July 1962. Although made available to persons in a position to use his findings, the report was still regarded as tentative and remained unpublished at the time its author returned to the United States. The report revealed especially gross deficiencies in the basic data from the sectors of agriculture, manufacturing, and retail and wholesale trade. This was damaging to the gross national product estimates, since the reliability of the aggregate depends upon the reliability of the major components.

#### Economic Activity of the Population

One of the earliest subjects to receive attention from the Statistical Advisory Group in 1958 was the labor force survey conducted by the Bureau of Statistics. Recommendations, intended to enhance its usefulness, called for its conversion into a monthly canvass of employment in the establishments of approximately 200 non-agricultural firms and government agencies. It was thought possible in

this way to obtain data on employment and payrolls for about one third of the workers in nonagricultural pursuits.

These recommendations -- good as far as they went -- did not meet all of the wishes for information by ROK and USOM officials. The Bureau of Statistics continued its work along traditional lines which embodied conceptions borrowed from the labor force survey of the United States. This was unrealistic because industrial structure and employment relationships differ so vastly in the two countries.

Interest in the problem again became acute as a result of difficulties of interpretation that arose in the economic activities section of the 1960 census of population. These led to the group's seventh published report, Economic Activity Concepts, prepared by Mr. David Yentis. The foreword pointed to "the urgent need for an examination of the concepts, definitions and procedures involved in obtaining such information." When Mr. Yentis completed his service, Mr. Collis Stocking, of the President's Council of Economic Advisers staff in Washington, was brought to Korea as a member of the Statistical Advisory Group to devote primary attention to the question. After long insistence by SAG, the Bureau of Statistics withdrew its labor force survey and joined with Mr. Stocking in the effort to develop a more realistic inquiry on "the economic activity of the Korean population."<sup>1/</sup>

---

<sup>1/</sup> Federal statisticians in Washington required several years of discussion and experiment to work out the concepts and specifications of the labor force survey of the United States. It is not unreasonable to expect that an analogous period of time will be required before a parallel survey fully adapted to the social economy of Korea can be perfected.

An important problem confronted by Mr. Stocking has been the manner in which the economic activity survey would be related to the technical manpower survey, with which the ROK Government is deeply concerned, but which in the past has disclosed serious defects. Mr. Stocking's efforts to eliminate these defects had to begin with definitions by which to identify "technical manpower."

#### Agricultural Statistics

The development of agricultural statistics, apart from the agriculture census, has been irregular and uncertain. A review of the statistical methods and procedures employed by the Ministry of Agriculture and Forestry was begun by the Statistical Advisory Group in the fall of 1958. Dr. Schweng took some initial steps toward a study of the role of rice in Korea's agricultural economy. He found the available statistical data inadequate for the purpose. In January 1959 the Advisory Group still hoped "that considerable time will be available for work on the statistics" collected by the Ministry of Agriculture and Forestry, but census issues were increasingly absorbing its time. A year or two later the statistical work of the ministry was reviewed by Mr. Virgil Childs of the United States Department of Agriculture as a consultant to the Agriculture Division of USOM.

In 1961, a constructive impact upon the statistical operations of the Ministry of Agriculture and Forestry was given by Mr. John W. McBride, who for a time was the principal link between SAG and that ministry. Korea's data respecting agriculture were put together into orderly

summations by Mr. McBride. He sought in particular to develop reliable data relating to costs of production of such staple commodities as rice and barley, thus pursuing the unrealized project of Dr. Schweng. The attractive and useful volume, An Introduction to Korean Agriculture, issued under Korean authorship by the Office of Rural Development of the Ministry of Agriculture and Forestry and published by the American-Korean Foundation, owed much more to Mr. McBride's assistance in its preparation than is evident in the volume itself.

Official figures on agricultural production, however, remained highly unreliable. The procedure employed by the Ministry of Agriculture and Forestry in obtaining them was described by Dr. Tepping as "the collection of what are essentially opinions; they begin at the lowest level of local administration (the myon) and filter through every higher level, finally becoming an official estimate of production. There has been experimental work for several years toward the establishment of objective estimates based on a crop cutting system. Within the next two or three years, Korea could establish a crop estimating system which will yield reliable estimates."

Considerable effort was expended by Dr. Tepping and his associates during the later months of the contract in perfecting a rice yield survey by the Ministry of Agriculture and Forestry. An unexpected dividend resulted during the work of the Bank of Korea upon the input-output table (see the following section). In deriving some of the entries for the table, the Bank used the rice production data obtained in this survey rather than the official figures of the ministry. It had

found a much closer correspondence between the first than the second in relating the figures to those of the Bank's own family budget survey.

It is understood that the ministry objected, though unsuccessfully, to the choice. Nevertheless, it seems to have become increasingly, even if somewhat belatedly, aware of the help that it might receive from the Statistical Advisory Group in improving its survey methods and techniques. In January 1962, SAG representatives consulted with the ministry on the design of a sample for a barley yield survey and on plans for extending the rice yield survey in the fall of 1963. Consultations regarding "various" ministerial surveys took place in February and a member of the SAG staff made a one-day field trip to observe operations on the production cost survey. In March there was consultation upon the proposed establishment of large-scale intercensal agriculture sample surveys which would provide figures by guns. The ministry also discussed with SAG an extension of its work to fishing and forestry.

#### The Input-Output Study

In January 1962 the new revolutionary government of the ROK issued its first Five-Year Plan for the economic development of the Republic. In the following month the Supreme Council for National Reconstruction directed the Bank of Korea to prepare an inter-industry or input-output table for the nation, pertaining to the year 1960. The purpose was to provide a tool to assist in planning for the separate sectors of the economy. The original directive specified completion about three months thereafter, by May 31. This was later extended to December 31. Budget allocation was approved in May and work started immediately.

Coincidentally, an appeal was made by the Bank to USOM to provide experts in input-output analysis to assist in the planning and execution of the study. This request was approved with the understanding that the services desired would be provided under the Korea statistics project. For the work Surveys & Research Corporation engaged as a consultant a specialist in the field, Mr. Marshall K. Wood of the National Planning Association. He arrived in Seoul in early August.

Mr. Wood's principal criticisms pertained to the haste with which the work had been undertaken, the brevity of the period within which completion was ordered, the scarcity and unreliability of much of the data upon which the table must be constructed, and the overelaboration that was contemplated.<sup>1/</sup> Upon his recommendation a further three-month extension in time was granted.

The critical examination previously made by Dr. Cazell and other members of the SAG staff of primary data employed by the Bank in compiling its economic indexes was of considerable help regarding the new data problem. The Bank felt it necessary to plan and in part to execute a considerable number of sample surveys by which to obtain further information on inputs into economic activities of all types. In his unpublished report of August 28, 1962, The 1960 Input-Output Study of Korea, Mr. Wood observed that these reports were not, in most cases, "very intensive in coverage: in many cases only three establishments are surveyed for an

---

<sup>1/</sup> It was initially to have 400 columns for "activities" and 700 rows for "products." Three additional tables were planned as successive stages of aggregation.

activity. However, they are probably as intensive as is feasible in the time available."

At Mr. Wood's recommendation arrangements were made with the Bureau of Statistics, with additional help from SAG, for the use in tabulations of mechanical equipment at the Korean Data Processing Center.

The input-output table was completed in April 1963, on time under its revised schedule. Its direct and by-product utilities are still to be fully determined. The SAG has hoped that some advances in primary data collection would result from the Bank's numerous ad hoc sample surveys and its reexamination of existing data. For example, there might be a retabulation of household expenditure surveys by income, family size, and month. This, in Mr. Wood's judgment, would reduce probable overestimates of consumption and permit more accurate projections of future consumption, as well as permitting the inclusion of seasonal items omitted from previous price indexes (see page 61).

An English language digest of the Korean press, on April 30, 1963, reported that the Bank's "Industrial Correlation Analysis Calculation Table for 1960" (its input-output table), made public on the previous day, had "revealed, among other things, that the past Gross National Product estimate for 1960 was 7.4% lower than the figure arrived at as a result of the industrial correlation analysis."

Mr. Wood's report had concluded that the use of input-output data and techniques in Korea's economic development planning would require computing equipment and "a professional staff of high competence, combining skill in economics, mathematics and computers." A suggestion



he made in line with this conclusion became the genesis of the proposal that an IBM 650 computer system be contributed for research and education purposes in Korea (see pages 45-46).

#### Monthly Survey of Mining and Manufacturing

A census of mining and manufacturing establishments with three or more employees was conducted between March 15 and April 5, 1961, covering the calendar year 1960. It was taken by the Korean Reconstruction Bank, employing 729 enumerators. The final report was published by the Ministry of Commerce and Industry and the Korean Reconstruction Bank, the results being summarized in the Korea Statistical Yearbook (Economic Planning Board) for 1962.

In its report of May 31, 1961, the Statistical Advisory Group noted that the tabulations of the census were being made manually and recorded indications "that the census is not of high quality." Shortly thereafter the group began working closely with the research department of the Korean Reconstruction Bank on the design of a monthly survey to provide general information on production, shipments, value added in manufacture, inventory, and labor in mining and manufacturing establishments with five or more employees. As planned, this would be "the first instance of an industrial survey based on modern sampling principles in Korea." A discouraging factor in the plan was the severe budgetary limitations against which the Korean Reconstruction Bank was compelled to work.

The first round of the new monthly survey was conducted in March 1962, collecting information for the calendar year 1961 and the month

of January 1962. Throughout the remainder of 1962 and 1963, SAG continued to work intensively with the Korean Reconstruction Bank on the enterprise, devoting first attention to the design of the survey and later to the improvement of field procedures and supervision. After the data collected had been manually processed for two monthly rounds, the group helped the Bank's personnel to work out a mechanical tabulation program which was put in operation at the Korean Data Processing Center. Close examination of survey results revealed deficiencies which led to a program of further improvement in 1963. In February of that year, approximately fifty enumerators on the survey staff were given a two-day retraining course, including a lecture by a SAG representative.

In connection with its continuous attention to the monthly survey of mining and manufacturing by the Korean Reconstruction Bank, the Statistical Advisory Group began research and consultations with the Bank of Korea upon the feasibility of constructing an industrial production index from the monthly figures. The Bank of Korea now published such an index based on other figures (see pages 59-60). Although definitive conclusions had not been reached when the statistics project ended, it was hoped by SAG that its research would show ways of improving the Bank of Korea index.

Hope also seemed justified that progress would result from an effort instigated by SAG for the coordination of the periodic industrial surveys conducted or planned by the Bureau of Research and Statistics, Bank of Korea, Korean Reconstruction Bank, Medium-Small Industry Bank, and the Ministry of Commerce and Industry.

### Census of Industry

The Republic of Korea intends to comply, through its Bureau of Research and Statistics, with United Nations recommendations that a census of industry be taken covering the year 1963. SAG has worked with the bureau and with an ad hoc interagency committee on various aspects of the proposed census, preparations for which are long overdue. In March 1963, it appeared that the bureau had accepted SAG's long standing and often reiterated recommendation for the integration of the census with a sample survey. This would greatly increase the accuracy of the census results by diminishing errors due to the difficulty of recall of a full year's business activities by respondents in a country with inadequate business records.

### Population Growth

There has been much discussion in Korea and among demographers elsewhere of the rate at which South Korea's population is growing. The official rate of 2.88 percent per annum is obtained by comparing the totals obtained in the censuses of August 1, 1955, and December 1, 1960 (approximately 21.5 and 25 million, respectively). Underenumeration in the 1955 census was probably greater than in 1960, leading to exaggeration of the growth rate figure. On the other hand, a high birthrate (40 or more per 1,000 population) and a lowering death rate (conjectured to be now about 10 per 1,000) lead some observers to believe that the present rate of growth is even higher than 2.88.

An authoritative review of Korean population statistics was completed by Park, Chai Bin, M.D. and D.P.H., of SAG's Korean staff in Seoul, prior

to his departure for an assignment in Brazil by the World Health Organization. It appears in Monthly Statistics of Korea, published by the Bureau of Statistics, Numbers 1 and 2, 1962.

Work on population projections, some of which are cited by Dr. Park, has also continued by Mr. Kim, Yun of the Bureau of Statistics, presently attending the University of Pennsylvania on a Population Council fellowship. Mr. Kim's earlier projections were discussed with members of the SAG.

#### Vital Statistics

Many of the difficulties attached to demographic analyses in Korea result from inadequacies in the data purporting to show numbers and rates of vital events. Deficiencies in reporting births and deaths, including the general practice of deferring registration until some need arises (e.g., birth registration when a child is ready to enter school) result in great inaccuracy. Official registration campaigns have in some cases resulted in an influx of deferred certificates too large for regular registration staffs to process.

During February 1963, the Statistical Advisory Group consulted with the Bureau of Research and Statistics on the design of a vital statistics survey which is to be treated as a supplement to each round of the economic activity survey (see pages 66-68).

#### Published Aids to Korean Statisticians

References to reports prepared by the Statistical Advisory Group and left behind it for the guidance of Korean statisticians in the

future have been frequent in the present pages. A relatively full list of such documents, both published and unpublished, has been assembled in Appendix C. Further mention should be made of some which have especially wide relationship to Korea's continuing statistical development.

The difficulty of incorporating an unfamiliar technical terminology into the native language of a country which is without past acquaintance with the technology concerned is apparent. In Japan, to meet the problem, English technical terms are liberally sprinkled through the pages of technical papers which are otherwise written in Japanese. The same device, though to a lesser extent, is used in Korea. However, this can never be adequate. In the past, Western, especially English, statistical expressions have been translated into the Korean language by processes of analogy with terms in common use. As a result, widely different Korean words have been given the same technical meanings in the work of different students and writers. The resulting confusion will be obvious.

In January 1962, the Korean staff of the Statistical Advisory Group, under the immediate direction of Dr. Tepping, prepared for publication a Statistical Vocabulary which listed approximately 1,800 statistical terms in English and Korean. Assistance in the preparation was given by a wider group of Korean statisticians, with the understanding that use of the Vocabulary would undoubtedly disclose needs for revision, suggestions for which were solicited. Some 2,300 copies of the published work were distributed.

In December 1962, the Director of the Bureau of Research and Statistics suggested that the Vocabulary receive wider distribution, and this raised again the question of a possible revision. In January 1963, a questionnaire was mailed by SAG to 807 persons or institutions to whom the Vocabulary had been sent. Although the 142 returns included numerous suggestions, the results of the survey (in a typed report of April 1, 1963) indicated that the work of preparing a second edition should preferably be left to later work by Korean statisticians. The survey did give rise to a critical review of the Vocabulary by two members of SAG's Korean staff, Professors Park, Hong Nai and Choi, Chi Hoon. It seems probable that these scholars will be able to continue work along the lines already begun in cooperation with committees on the standardization of terms that have been established by the Ministry of Education.

Of undoubted help in improving the statistical operations of agencies using the facilities of the Data Processing Center in the future will be a manual, Introduction to Punch Card Data Processing, prepared under date of January 15, 1963, by Mr. Fairley for use in his classes on this subject, mentioned above and in Appendix D. The publication is bilingual, with charts. The Korean language edition requires seventy-six pages.

Of broader help to teachers and students will be the two-volume (295 and 245 pages) translation into Korean by Korean members of the SAG staff of Introduction to Statistical Analysis by Wilfred J. Dixon and Frank J. Massey.

The Korean Standard Industrial Classification, Volume I (Mining & Manufacturing), was published by the Bureau of Research and Statistics in November 1962 in the English and Korean languages. Developed by an interagency committee under the guidance of Dr. Cazell, further work on the standardization of statistical classifications is in charge of committees of the Statistical Council.

Even the departure of the statistical advisors at the end of the contract is yielding some benefit to Korean statistical operations. More than 364 of SAG's working tools are being turned over gratis to the Bureau of Research and Statistics. These include seventeen items of equipment; eighty-eight technical volumes in English, Japanese, and German; various professional journals and reprints and about 200 publications of the United States Government and international organizations. Access to all of this material by "those Korean and non-Korean personnel whose responsibilities warrant such access" has been stipulated by USOM.

#### The Flow of Current Advisory Activities

Any itemization such as that given in this chapter suffers from oversimplification. It fails to give a picture of the flow of work in which the field staff has been engaged from day to day and month to month, as well as the interrelations among particular staff activities. The essential accomplishments of the group have been more closely related to this work flow than to isolated achievements, which have more of the character of punctuation marks than of written text in the history of the project.

In an attempt to portray the character of this work flow and its diversity, with possibly some of the interrelationships that it has

involved, there follows a recapitulation of the interests and activities of the SAG, as recorded in a work report, for the single month of November 1962. In that month the project director arrived in Korea for a six-week stay, but it was also a month in which the staff of statistical advisors was reduced to four men. A majority of the items relate to matters upon which continuing advice on statistical matters was being given to ROK Government agencies.

Discussions with the American-Korean Foundation concerning a suggested donation of computing equipment by the IBM to the Data Processing Center for training and research purposes.

Summarization by the Ministry of Agriculture and Forestry of observations on rice yield survey operations. Planning analyses of the data.

Monthly survey of manufacturing and mining by Korean Reconstruction Bank. Usefulness of the survey in providing an industrial production index. Plans to study its non-sampling errors and improve 1963 procedures.

Proposed special-purpose survey by Bureau of Statistics of manufacturing and mining establishments producing 55 commodities. Its relationship to 1963 Census of Industry.

Sample design specifications for quarterly survey by Bureau of Statistics of family expenditures.

Bureau of Statistics Survey of the Economic Activity of the Population. Analysis of tabulations with calculation of sampling errors for selected estimates. Training of enumerators.

Revision of Monthly Survey by Ministry of Commerce and Industry of industrial establishments producing 323 commodities. Attempt to coordinate with surveys of industrial establishments by the Korean Reconstruction Bank and the Bureau of Statistics.

Plans for a Korean statistical congress discussed with university professors and the Asia Foundation.



Family Planning Association study under grant by the Population Council of New York. Tabulations and agency to make them.

Business relations between IBM and Korean agencies following departure of the SAG.

Extension of industrial classification by a Subcommittee of Statistical Council from manufacturing and mining to other economic activities.

Preparation by Statistical Council Subcommittee on Occupational Classification of list of occupational titles. Preparation of descriptions and explanation of general principles on which based.

Methods and coverage of Technical Manpower Survey of 1963.

First priority tables of population and housing census, based on completed tabulations. Planning and tabulation of agriculture census post enumeration survey.

The preceding list may suggest that the improvement of Korea's statistics has been a process analogous to the "socialization" process within a group, in which the less experienced and sophisticated members mingle freely with those of broader education and outlook.

IX

EFFORTS TO IMPROVE STATISTICAL ORGANIZATION

The improved climate now surrounding statistics in Korea will be described in Chapter X. It is more favorable than in 1958 for the creation of a genuine statistical system. As the statistics contract ends, foundations and framework for such a system are in place, but the superstructure is still to be completed. Much of the lip service of five years ago to "needs for statistics" -- regardless of quality -- has changed to comprehension of the attributes that a good statistical system must have: official and public support, statistical standards, accuracy, cooperation, central control and coordination. Korean acceptance of these attributes also began with lip service.

For example, the monthly report of SAG for September 1959 records the approval by the Council of State of "regulations for conducting the statistical activities of the various agencies of the ROK Government." Their purpose was "to improve the accuracy of various statistical series, prevent duplication of effort and to coordinate the statistical activities of the different Ministries." No translation has been found of these "regulations," nor is it known whether they were ever promulgated. If so, there is no evidence that an administrative mechanism to effectuate them was provided.

The greatest source of encouragement to SAG is the growing habituation of Koreans in different agencies to consult upon questions of common concern. This is an indispensable element of a statistical system, and here the

record of accomplishment by the Statistical Advisory Group is clear. Through the group's initiative, and for the first time in their national experience, the appropriate personnel of different (and often competing) statistical units are now meeting together and serving on committees together for the consideration of questions that affect all of them.

Instances of such meetings and committees are recorded with increasing frequency in the periodic reports of the Statistical Advisory Group. Thus, in early 1959, about one year from its launching, the SAG encouraged the creation of an Agriculture Census Advisory Committee composed of officials of the Bank of Korea, Ministry of Agriculture and Forestry, Agricultural Bank, Ministry of Reconstruction, Ministry of Education, Agricultural Cooperation Association, Institute of Agriculture, Economic Development Council, and several university professors. The first meeting of the Committee on July 9, 1959, was "the first time in Korea in this field that technicians have been brought together to discuss and advise on governmental proposals not yet formally adopted."

The establishment in 1959 of the Census Council recommended by SAG in the previous year also brought early occasions for representatives of different government agencies to confer with regularity. Its secretariat, created in March, was initially composed of bureau directors from three ministries, the director of the research department of the Bank of Korea, and Dr. Tchah, Kyun Hae, economic planning officer of the Ministry of Reconstruction, as secretary general. By July this working group, as it came to be called, was holding weekly meetings with subordinate technical groups meeting still more frequently. The Council itself had

held a first meeting in April at which it genuinely assumed the appropriate role of an interministerial body.

Relatively recent and outstanding instances of protracted inter-agency consultation were the working groups that during 1961 and 1962, under the chairmanship of Dr. Cazell of SAG, hammered out a standard industrial classification for Korea and began work on the standardization of classifications for commodities and occupations. It was observed that as the work of these groups continued, the participants began more and more to exhibit interest in and loyalty to the common enterprise, and to come to meetings prepared in advance for joint effort.

Such progress was not without setbacks. As in the case of so many other efforts by the statistical advisors, it was zigzag. Thus, the promising start at interagency consultation made by the Census Council in 1959 was later halted, if not reversed.

At its first meeting in April 1959, the Council accepted the recommendations of the SAG that the population and housing census be combined and conducted by the Bureau of Statistics, and that the agriculture census be conducted, as previously planned, by the Bank of Korea. In October, the earlier presidential decree was amended to provide that the Director of the Bureau of Statistics should be Secretary General of the Census Council. By other action, the agriculture census was transferred to the Ministry of Agriculture and Forestry, in itself an acceptable move. But the positions of Chairman and Secretary General of the Census Council, with control over its working group, were thereafter lodged in the same, politically minded Ministry of Home Affairs. The relatively high-level

consultations of the working group appear at this point to have ended; and the Council did not resume meetings.

The importance of the events last described from the standpoint of statistical organization was the setback they gave to expectations that the Census Council would become an overall agency of statistical coordination and control when the censuses should be completed.

In retrospect it seems probable that the traditions of ministerial independence in the ROK Government were too strongly entrenched to be modified by such a new and untried innovation. For example, in July 1959, at a time when the working group was most active, SAG in its monthly report, dealing largely with census developments, expressed the need for "a clearer understanding and better working relationships" between the Bank of Korea, Ministry of Agriculture and Forestry, and the Agricultural Bank. "A resolution of current differences will be necessary for the success of the census of agriculture."

In the same month a plan was developed under which the census of population and housing would be responsible for the field identification of households in which there was a farm operator and for preparing for each such household a separate form to be turned over to the census of agriculture. Both censuses would use the same identification number on their punch cards, making it possible to collate and cross-tabulate data from both and making the independent collection of household data from the second unnecessary. During the following months other methods of interrelating the two inquiries were developed. None of them was fully

accepted or accomplished the objective of integrating two censuses that should have been more closely related.

In SAG's opinion, the comparative failure of such efforts was due to the lack of a strong and authoritative official body to provide a unifying influence in the statistical work of different agencies and take the lead in negotiations that would achieve a resolution of differences. The Census Council might never have become such a body even if it had maintained a truly interministerial character. But when the authority it had was concentrated in the hands of that single ministry -- Home Affairs -- of which all others were afraid because of its political and police powers, the possibilities of genuine cooperation among ministries in respect to the two censuses were greatly diminished and all but disappeared. In effect, the Ministry of Agriculture and Forestry thereafter went its own way in matters concerning the census of agriculture. Subordinate personnel were friendly and cooperative, but as ministry representatives they yielded only grudgingly and in part to browbeating by the Bureau of Statistics and to persuasion by the SAG to bring the ministry's census plans into line with those for the population and housing census.<sup>1/</sup>

---

<sup>1/</sup> The Ministry of Agriculture and Forestry, with some sympathy from the Agriculture Division of USOM, was never wholly reconciled to its inability to obtain, under the statistics contract or otherwise, statistical advisors of its own. It continued to feel that the SAG had a special advisory relationship to its rival in census taking, the Bureau of Statistics. The Bureau, on its part, made claims to legal authority in census taking, quite apart from that derived from the Census Council, that the Ministry of Agriculture and Forestry did not concede.

It is not unlikely that more progress toward improved statistical organization was salvaged from these seeming setbacks than was realized at the time. The interministerial mechanism for coordination had been effectually scuttled. Nevertheless, considerable collaboration among different agencies -- even those as mutually hostile as the Ministry of Agriculture and the Bureau of Statistics -- had been experienced. Both the conception of coordination and newborn official habits of working together to accomplish it survived. The Census Council as an agency for statistical coordination for some time remained nominally in existence, providing precedent for future attempts that could be, and have been, more successful.

The improvement of statistical organization remained a central effort in the Korea statistics project until its termination. In the first of SAG's monographic reports, it sketched two "alternative approaches to improved organization."

"On the one hand, the statistical agencies might be left in their present locations within ministries; while an agency of statistical planning, coordination and control in the State Council Secretariat, or directly under the Prime Minister, is given jurisdiction over them. In this location such an agency might be associated with other economic planning agencies. This is the pattern of organization adopted at the end of World War II by the British Government when it converted Mr. Churchill's personal statistical staff into the Central Statistical Office of the Cabinet Secretariat.

"The alternative is a technically efficient, modernized and well supported Bureau of Statistics, freed from non-technical associations and influences, which retains its present 'operating' functions and in addition is given the 'staff' functions of a statistical planning and coordinating agency. This is the Canadian pattern, embodied in the Dominion Bureau of Statistics.

"One possible means of assuring to the Bureau of Statistics the independence required by the second alternative would be to remove it from the Ministry of Home Affairs and place it in a neutral position under the Prime Minister. Another would be to give the Bureau an autonomy within the Ministry similar to that of the Institute of Agriculture within the Ministry of Agriculture and Forestry."<sup>1/</sup>

It was added that if the second alternative were chosen, it would be essential for the Bureau of Statistics to "exercise capably and impartially the functions of statistical planning, coordination and control, while enjoying the confidence of other statistical agencies and the public."

The promulgation on January 15, 1962, of the Statistics Law of the ROK Government (Law No. 980), together with an enforcement decree (Cabinet Decree No. 512, promulgated March 10, 1962)<sup>2/</sup>, were long steps toward the adoption of the foregoing SAG recommendations. The law was patterned after Japanese statistical legislation in the framing of which the project director had participated. It placed in the hands of the Chairman of the Economic Planning Board<sup>3/</sup> the authority to approve,

---

<sup>1/</sup> Better Statistics in Korea, page 25.

<sup>2/</sup> Reproduced in English translation, together with Regulation of Statistical Council (Cabinet Decree No. 513, promulgated March 10, 1962) in Monthly Statistics of Korea, Seoul, Economic Planning Board, No. 3, 1962, pages 7-14.

<sup>3/</sup> The Economic Planning Board was a new agency with superministerial status, replacing the former Ministry of Reconstruction but gathering together within it a number of agencies and activities from other ministries, including the Bureau of the Budget from the Ministry of Finance and the Bureau of Statistics from the Ministry of Home Affairs.



disapprove, suspend, or require alterations in proposed statistical surveys which must be submitted to him in advance. This authority was extended to surveys conducted by "the national or local government, or other organizations." Other related authorities were similarly comprehensive, strong, precise, and in the direction of a positive, central control over all Korean statistics.

Two provisions of the law in addition to those just cited have particular bearing upon the possibilities of improving statistical organization. The first (Article 19) was the establishment of a Statistical Council within the Economic Planning Board "for the purpose of advising and making recommendations on government statistical surveys." It was to be composed of the Deputy Chairman of the Economic Planning Board as Chairman and not more than twenty additional members. Of these, seven were to be Class 2 officials selected by ministers or equivalent agency heads; three were to be of department chief level designated by the heads of the Bank of Korea, Reconstruction Bank, and Agricultural Cooperative Central Council (the former Agricultural Bank); and not more than ten were to be "commissioned by the Prime Minister upon the request of the Chairman of the Economic Planning Board from among those who have a wide range of knowledge and experience in statistics" -- referring in this manner to university or nongovernment experts..

The second (Article 18) provides that "in accordance with provisions of Cabinet Decree the Chairman of the Economic Planning Board may delegate to the Director of the Bureau of Statistics the powers enumerated" in its Article 2 and 3. Inasmuch as Article 2 pertains to definitions and

Article 3 requires merely that "designated statistics" be collected in accordance with the law and that regulations concerning them may be prescribed by the Economic Planning Board, the purport of this article is slightly obscure. The legislative history suggests that it was intended to permit the Chairman to delegate his authority for statistical coordination to the Bureau of Statistics; and his actual use of it confirms the interpretation.

Although this appears consistent with one of the alternatives recommended by SAG to the ROK Government, conditions had been attached that have not yet been fulfilled. SAG specified that the Bureau of Statistics should be dissociated from political and other nontechnical affiliations; and this was accomplished by its transfer to the Economic Planning Board. SAG also specified that the Bureau be drastically upgraded in professional competence; and this has not occurred. It probably cannot occur, as the Director of the Bureau himself appears to believe, until positions of higher grade are established within it. This may necessitate an elevation of the entire Bureau organization to a higher status (e.g., that of an "Office") within the ROK administrative structure.

Two sets of considerations have continued to determine the judgment of the Statistical Advisory Group that the Bureau of Statistics is not yet able effectively to coordinate the statistical work of the ROK Government. The first has just been indicated. The Bureau still lacks, and is unable to attract, personnel of sufficient technical skill, experience, prestige, and rating within the employee classification scheme to work out solutions for highly technical problems of statistical interrelationships and gain

acceptance for them. Second, it is already loaded with operating responsibilities heavier than it can discharge effectively. It needs more high-grade staff for these responsibilities alone.

The Statistical Advisory Group has been highly gratified that several of its basic proposals for improved statistical organization have been accepted by the ROK Government. First, the necessary powers for statistical coordination and control have been established and appropriately placed in the head of a superministerial agency at the center of the government. There they are awaiting exercise in close association with the government's economic planning and budgetary controls. Second, the Bureau of Statistics, renamed, significantly, the Bureau of Research and Statistics, was removed from its political and nontechnical associations in the Home Ministry and placed in the same agency.

What remained when these steps were taken was to take advantage of this ideal context. The method proposed by SAG, at least until the staff of the Bureau of Research and Statistics should be upgraded in its level of competence, was the formation of a small special group of experts, three to five in number, to assist the Chairman of the Economic Planning Board. They would be in immediate charge, on the Chairman's behalf and in his name, of the complex negotiations involved in statistical coordination and control. Men of high technical ability and prestige in these positions could represent the Chairman in such negotiations as less highly placed subordinates could not. The issues raised in them always involve a plurality of ministries or pseudo-governmental agencies; and there should

be no question of access to top officials. A statistical coordinating staff should include the ablest Korean statisticians whose services the ROK Government could command.

At project termination this proposal has yet to be adopted, but it has been sympathetically received by several successive Chairmen and Vice Chairmen of the Economic Planning Board. Its nonadoption does not appear to connote lack of sympathy with the objectives upon which the proposal rests.

Meanwhile, the Statistical Council has been reenacting much of the early history of the Central Statistical Board, a prototype body in the Government of the United States during the early thirties. In the Statistical Council, as in the former Central Statistical Board, consistency in attendance is lacking. Quorums are difficult to secure. The members have other full-time responsibilities and give low priority to the Council's business. Alternates of alternates attend meetings.

The United States experience suggests that such early discouragements are inevitable and may in time disappear. After some seven years, the Central Statistical Board was disbanded, but not until after its staff organization, now the Office of Statistical Standards of the Bureau of the Budget, had become a recognized part of Executive administration. The Statistical Council in Korea gives some indications of a parallel evolution. It has several active committees, to which assignments affecting many ROK statistical agencies have been given.<sup>1/</sup>

---

<sup>1/</sup> In particular, effectuation of the program for foreign trade statistics, transferred to it from the Bank of Korea, and the completion of the work on industry and occupational classifications begun by interministerial committees.

The Council's de facto responsibilities are increasingly to the Bureau of Research and Statistics. If it should develop a usefulness and prestige commensurate with the needs that its creation expressed, the Bureau of Research and Statistics may gain correspondingly and itself become, with the Council's help, an effective instrument for promoting the growth of the Korean statistical system.

An indirect result of the developments sketched in this and preceding chapters has been the growing acceptance by the ROK Government of the desirability of central control over the field work of national statistical surveys. The principle itself is implicit in the Statistics Law and the agencies and processes established under it. The utilization of modern methods of sampling, for example, is incompatible with the traditional use of bureaucratic channels of communication, upward and downward through the governmental hierarchy, to obtain statistical information. The changing habits of mind here reflected are no doubt comparable in their long-run importance to those which accompany the development of habits of consultation and cooperation among representatives of different agencies which were stressed at the beginning of this chapter.

X

THE INTANGIBLE GAINS

Demonstrable improvements in Korea's statistics program "covering organization, administration and operations," as prescribed by the statistics contract, have been cited in preceding pages. They have included improved status for statistical agencies within the ROK administrative structure; statistical legislation designed to coordinate statistical activities; satisfactory housing and other facilities for statistical work; acquisition of data processing and related equipment; training of Koreans in statistical theory and practice at home and abroad; improvements in statistical publications; and numerous technical improvements in statistical operations and in statistical series that are indicated in such ways as by the calculation of estimates of error and their inclusion with published figures.

Impressive as much of this progress has been, the improvements of greatest significance have been intangible. Some of them, scarcely perceptible while occurring, are now discernible in retrospect over the entire span of the contract period. They pertain to such questions as the prestige of statisticians and of statistical agencies within the government, official understanding of the needs for statistics and the credence accorded government figures, the public consciousness of needs for accuracy in official data and public willingness to cooperate in supplying such data.

As suggested in the preface, progress in such intangible matters is continuing and could even accelerate after the contract has terminated, if those in positions of responsibility accept the challenges which will come from "being on their own." In that case one of the major hopes of their advisors would be realized.

✓ An Informed Korean Appraisal  
of Project Results

During the annual meeting of the Population Association of America in Philadelphia, April 25 - 27, 1963, a number of Korean graduate students in American universities met informally by themselves to discuss and appraise the Korea statistics project and its accomplishments. It was a subject with which all were familiar. Some when at home were teachers in Korean universities. Others had been employed in the Bureau of Statistics or upon other statistical work of the ROK Government. As reported to the project director by one of them, their conclusions may be summarized as follows, paraphrase yielding whenever possible to direct quotation.

Before the arrival of the Statistical Advisory Group, statistics in Korea reflected "bureaucratic wastage." Statistical activity existed and consumed resources, but was not productive. People knew there were statistics officials, but did not know what they did or were trying to do. There was "more wastage" in the Bureau of Statistics than in any other government unit, but "this was not recognized." Borrowing the imagery of a poem by T. S. Eliot, improving statistics in Korea was a case of "breeding lilacs out of the dead land."

Suppose the Statistical Advisory Group had not come: the Bureau of Statistics "would undoubtedly have remained in hibernation, staffed with unimaginative people, meeting minimum requirements for survival, eating their potatoes in a small corner of bureaucracy." The Bureau would have survived because of the existence of "a superficial recognition within Korean officialdom of the importance of statistics. But with its numbness the government administration failed to sense some pain resulting from its lack of good statistics. People who were in a position to formulate policies were almost blind to statistical projects which appeared to have little immediate political or economic attraction. This was due to the fact that these people, under great immediate political pressure, had a short-time perspective."

Despite the nonimplementation of many SAG recommendations, the ROK Government within its resources has "made the most of recommendations which were necessary and sufficient to lead to improvement."

However, a communication problem has been involved, as a result of which "the work done by the statistical advisors may be undervalued, especially by the lower echelons of Korean Government employees. Their envy of the much larger salaries of SAG members is important in this. They say, look what they /the advisors/ and we do. The result is 'cognitive dissonance.' Differences in salaries, as seen by these Korean employees, are far out of proportion to differences in achievement. Since their own salaries cannot be brought up to the scale of those paid the advisors, they tend to disparage what the advisors have done. Of course they don't see the whole picture."



Another important factor, the Korean graduate students believe, is the dissipation of the haloes that originally encircled the heads of the advisors. When this occurred, the limitations of the latter tended to be exaggerated, as was also, originally, their superiority of talent. Rumor then took up the work of downgrading the competence of the dehaloed advisors.

Such reactions, the students said, were to be expected and should not detract from the achievements of the Statistical Advisory Group in changing the picture of Korea's statistics. "Look at the Bureau of Statistics! Considering what it was five years ago -- poorly managed, looked down upon and understaffed, a dumping ground within the government service -- the bureau has become a dragon from a small fish! Five years ago it was the lowest spot to which unwanted employees of other agencies of the government could be transferred, from which they could only hope for an opportunity to be rescued. Now, those who are interested in statistics want to stay in the Bureau of Statistics. For example, Park, Jae Soo decided to make statistical sampling his career, as against other career opportunities, and was in the United States for a year for training as an employee of the bureau. Another is Park, Jae Young. Such people could not be found five years ago. The bureau was then filled with people who had merely been dumped into the trash can."

During the past five years, these discussants continued, there has emerged a "group of young people in Korea who want to do something in statistics. Eventually they will become Korea's leaders in statistics,

provided the conditions exist by which the dead land can bring the lilacs to flower. But for the present the government is not prepared to make conspicuous moves to accept the recommendations of the Statistical Advisory Group because the complaints would be too great from the diehards of the era of bureaucratic wastage. The statistical service is a subsystem of the larger system whose structure and characteristics stand in the way of statistical improvement."

#### A Changed Statistical Climate

The well-informed testimony just recorded indicates that some obstacles to the improvement of Korea's statistics are still unremoved. Others will be mentioned in Chapter XII. Nevertheless, there is ample basis for a belief that an intellectual and political climate now exists in Korea that assures continued improvement in statistics after American advisors have departed.

At the outset statistics and statisticians were tolerated, but not esteemed. Attitudes toward them were not dissimilar to those attributed to Charles Francis Murphy, leader of Tammany Hall, when confronted with a wave of civic reform early in the present century. To newsmen who sought his views he confided, "Why, yes, boys, I'm for the uplift too -- if that's the word."

Korean officials and public were "for" statistics, a word recently brought to their notice. They assumed that statistics were something related to the national development for which they hoped. The word was accepted as a symbol of modernity, although any uses made of

statistical data were obscure and any necessity that they conform to scientific standards in collection, compilation, or analysis was not perceived. In this context, those performing statistical tasks were regarded either as clerks of a low order or, at best, as second-class medicine men.

The methods of collecting data through the lower echelons of local government administration accentuated such appraisals. The customary perquisites were often unavailable for those so engaged. In one reported instance, the task of collecting crop reports within a gun was determined by lot among its staff. The clerk who drew the assignment was then compensated for his misfortune by a collection taken from his office associates.

As the statistics contract ends, statisticians are no longer looked down upon. What they do may still not be generally understood -- it is little understood in any country -- but the importance of doing it expertly and accurately has permeated the public consciousness. Many Korean leaders have observed these changes and attributed them to the work of the Statistical Advisory Group.<sup>1/</sup>

The assistant project director observes that rivalries and "in-fighting" among Korean statistical agencies, which have provided

---

<sup>1/</sup> On May 15, 1963, the Cultural Medal of the Republic of Korea was awarded to Messrs. Tepping and Rice. The accompanying Citation refers to "invaluable assistance to the Republic of Korea in the field of statistics." Also, to "unsparing efforts and outstanding professional knowledge, which Korean statisticians have been privileged to share...."

many frustrations to their advisors, have actually been an outgrowth of the enhanced status of statistical work. When the project began it could be said of any new statistical job that "nobody wanted it." Only when the statistical responsibilities of agencies or individuals had acquired prestige were they worth struggling for!

The insalubrity of climate first encountered was not found on the Korean side alone. The formalism of some American aid procedures added to the emptiness of the Korean statistical scene. To illustrate: In the summer of 1959 it was proposed that twenty Koreans be selected for training at the United Nations Statistical Training Center at the University of the Philippines, preparatory to serving as census supervisors and instructors. The examination by means of which they were to be chosen, prepared by American aid authorities, emphasized the mastery of English grammar and literary reading ability. In the opinion of SAG personnel, it failed when given to segregate the candidates whose native abilities seemed most likely to enable them to profit from training and thereafter to serve as leaders in the census. After negotiations by Mr. Ehrman and Mr. Lawrence in Seoul and Manila, Mr. Lawrence prepared and administered a new test which sought to determine the candidates' abilities to grasp the statistical conceptions and understand the techniques which they would be called upon to apply in their later work. Facility in literary English usage was deemphasized. As a result, the trainees sent to the Statistical Training Center at Manila were said by its staff to be among the strongest yet admitted from any Far Eastern country.

Of cumulative effect upon the statistical climate have been the lectures, courses of instruction in aspects of statistics, and the informal discussions to some of which reference has already been made. The total number of appearances before Korean audiences by staff members of SAG has been greater than indicated by the selected list in Appendix B. A complete count might well require three figures and probably every member of the staff would be included.<sup>1/</sup>

Lectures or lecture series were scheduled by Dr. Schweng in the fall of 1958 before the National Officials Training Institute, the Bureau of Statistics, the Ministry of Defense, and the Ministry of Health and Social Affairs. In later years, methodical courses in elementary statistics, statistical sampling, and other technical aspects of statistics were arranged by Dr. Tepping and other SAG members for personnel of the Economic Planning Board, the Bank of Korea, and a number of other agencies. Among the final programs of SAG was a series of three courses in punch card data processing by Mr. Fairley. They began on April 1, 8, and 15, 1963, respectively, and were attended by 174 students from eight ministries, four public banks, three Seoul universities, several city and provincial governments, and KMAG, an army organization. A summary of the attendance is given in Appendix D. In addition, classes in the techniques of wiring IBM machines, meeting three times weekly, were given to the machine tabulation section of the Bureau of Research and Statistics.

---

<sup>1/</sup> Courses in technical aspects of statistics have encountered discouragements mentioned below in Chapter XII.

Through such means much of the magic and indifference reflected in the early Korean outlook on statistics, together with the formalism illustrated above, has been replaced or is being replaced by a spirit of realism. Perhaps the most convincing indications of this new realism on the part of the public may be found in Korea's daily newspapers. In the regular press digests prepared and translated by USOM is an increasing number of news accounts and editorials concerning statistical activities and concerning the social and economic implications of the data which are compiled and released to public view.

On a more professional level the new spirit of realism was evidenced in the first Korean Statistical Conference, planned and organized by a self-appointed steering committee of Korean professional statisticians. This met at Seoul National University in morning and afternoon sessions on May 11 and 12, 1963. Among twenty-six scheduled topics in the printed program (according to an English translation) were the following: "Application of Statistics in the Medical Field" by Ko, Ung Rin of Masan Military Medical School; "Methods and Problems in Research on Group Genetics," Cho, Wan Kyu, Seoul National University; "Methods of Estimating Labor Force and Population," Im, Tae Bin, Bureau of Research and Statistics, Economic Planning Board; "Problems of Statistical Structure," Kahng, O Chun, Director, Bureau of Research and Statistics; "The Importance of Mathematical Statistics," Hong, Sung Hae, Tonguk University; "Statistical Methods in Marketing Surveys," Yun, Ki Chung, Hanyang University; "The Input-Output Table," Han, Ki Chun, Bank of Korea;

"Problems of the Mining and Manufacturing Sample Survey," Chung, Wu Pung, Korean Reconstruction Bank; "Statistical Education in Middle and High Schools," Park, Han Shik, College of Education, Seoul National University. Among other program items was a symposium regarding the 1960 censuses.

These topics and speakers have been selected for illustration, almost at random, though excluding papers presented by members of the Statistical Advisory Group. Without the tutelage of this group for half a decade, many of the Koreans who took part would scarcely have possessed the ability to participate. It is safe to assert that such a program could not have been organized five years ago.

XI

CONTINUATION OF CURRENT ACTIVITIES<sup>1/</sup>

Ongoing activities such as those in which the Statistical Advisory Group in Korea has been engaged cannot be terminated suddenly without risk that some of the gains from efforts expended will be lost. It is the hope of the group that the threads its members have laid down will be picked up by others, particularly the Economic Planning Board, the Statistical Council, and the personnel of statistical agencies of the ROK Government who may be directly concerned.

In the present chapter is singled out a number of individual statistical series or projects upon which the Statistical Advisory Group was actively working at the time it disbanded. Their inclusion does not in itself imply that past developments respecting them have been unsatisfactory; although this has been true in some cases. They are briefly described and their deficiencies noted here in order to urge that work upon them be continued and accelerated. In most instances, they are in need of more constructive attention from the ROK Government in the future than they have received in the past.

---

<sup>1/</sup> This chapter, which supplements Chapter VIII, has drawn substantially upon the Semi-Annual Report of the Statistical Advisory Group in Seoul for its concluding period, January 1 - May 31, 1963. Material quoted, unless otherwise identified, is from that report.



### Analysis of Census Statistics

Although the curtailed census tabulation program recommended by the Statistical Advisory Group is well on the way to completion,<sup>1/</sup> "very little work has been done by the Bureau of Statistics to analyze census results that have already been tabulated ... in spite of continual urging by the Statistical Advisory Group."<sup>2/</sup> No program for the analysis of the agriculture census data had been prepared by the Ministry of Agriculture and Forestry so far as last known to the SAG.

### Post Enumeration Survey of the Censuses

Respecting this highly important survey, " ... little has been done by the Bureau of Statistics to analyze the results. A program for such analysis was prepared by the Statistical Advisory Group, but no one in the Bureau has been assigned to work on this project. At this point it does not seem likely that the Bureau will obtain from the Post Enumeration Survey the information that is available there for the improvement of future work in census operations."

---

<sup>1/</sup> See above, Chapter VII. The final estimate at contract termination was that tabulations for the population and housing census, then over 90 percent completed, would be finished within a month. For the agriculture census, then about 65 percent finished, completion of tabulations was forecast about the end of October 1963. The forecast was based on arrangements for extending the rental of one of the two rented IBM type 101 machines to use with the two others of this type that were purchased.

<sup>2/</sup> Some work has been done on converting the ages reported in the census according to Korean conception to the Western age system, to permit comparisons with the 1955 census in which the latter was used. Methods of conversion suggested by SAG have not yet been utilized.

### The 1963 Census of Industry

In March 1963, the Bureau of Statistics belatedly accepted the recommendation of the Statistical Advisory Group for the integration of this census with a sample survey (see page 75). It was then too late to plan an independent sample survey and methods were worked out by the group, with the cordial cooperation of the Reconstruction Bank, for the utilization of its industry survey to the extent possible. Close attention will be needed by both agencies to make this arrangement effective.

### Survey of Economic Activity of the Population

This new inquiry, replacing the labor force survey (see pages 66-68), has been placed on a regular quarterly basis. There is need for further development of the concepts embodied and for improvement in the training and supervision of interviewers and in the operations themselves. Despite repeated urging by SAC, there has been little attempt by the Bureau of Statistics at analysis of the data obtained.

### Technical Manpower Survey

The results of a technical manpower survey in 1961, published by the Economic Planning Board, were quite useless because of vague objectives and concepts, poorly defined terms, and untrained and inexperienced interviewers. The Bureau of Research and Statistics was asked to repeat the inquiry in 1963 in consultation with the Statistical Advisory Group. The group began efforts in the summer of 1962 to stimulate planning for an improved survey, but accomplished little until January when it was

presented with completed plans that repeated the deficiencies of the 1961 study. A series of daily meetings between SAG and representatives of the Bureau of Research and Statistics resulted in joint visits upon manufacturers, followed by further discussions. Eventually, the Bureau of Research and Statistics adopted "many" of the SAG recommendations, but since these were "out of context," there is still much left "to be desired."

On the positive side, SAG believes that bureau personnel has (a) become aware of the more glaring mistakes of the 1961 study and developed a determination to avoid them; (b) been introduced to the principles of occupational classification and to occupational concepts with which they were previously unacquainted; (c) learned that years of employment alone are an insufficient basis for the classification of skills, which must take into account the duties and responsibilities of an occupation.

#### Agricultural Surveys

The Ministry of Agriculture and Forestry has received assistance from the Statistical Advisory Group on a number of sample surveys, dealing with: rice yield, barley yield, food consumption, farm economy, and farm production costs. In addition plans are in process for general purpose, intercensal surveys which will provide estimates for relatively small areas.

All of these are in charge of the research and statistics section of the ministry's Bureau of Agricultural Administration, which lacks a technically trained professional staff. The difficulties of building up

such a staff at a low level within the governmental hierarchy have already been mentioned in connection with the Bureau of Research and Statistics of the Economic Planning Board. They are greater when only a section of a bureau is involved. In preparation for the agriculture census, a strong effort, supported by SAG, was made unsuccessfully to obtain bureau status for the section responsible for agricultural statistics.

The present period is particularly critical for the research and statistics section because of the departure of the Statistical Advisory Group and especially the departure for the United States of Professor Park, Hong Nai, perhaps Korea's most competent agricultural statistician, who was a member of the Korean staff of the group. Professor Park has been granted a fellowship for the completion in the United States of work toward a Ph. D. degree in his field.

#### Industry Survey of the Korean Reconstruction Bank

The bank's research department and its statistics section, as well as their superior officers, have not only taken great interest in this survey of manufacturing and mining but have fully utilized the opportunity to receive technical assistance upon it from the Statistical Advisory Group. The survey has received the group's constant attention. There is thus good reason to hope that momentum will be maintained and that there will be continued improvement in the survey and in the usefulness of its results. Remaining problems include reductions in the variance of estimates for certain industry groups by the refinement of

lists and by certain procedural changes. The staff of the statistics section will be reenforced in the fall by the return of Mr. Kim, Yung Bai from a year of studying principles and methods of statistical sampling at the United States Bureau of the Census.

#### Vital Statistics

The serious deficiencies in Korea's data on births and mortality have long been recognized and attempts to remedy them are currently proceeding in different ways. The Statistical Advisory Group suggested that the registration system be amended to place more responsibility on doctors, midwives, nurses, and other professional or semi-professional people who are in attendance at births or deaths. A few exemplary cases of enforcement were suggested to publicize the existing legal requirements, along with a nationwide campaign of enlightenment on the importance of vital data. Visits to local areas by personnel from the Bureau of Research and Statistics to check on the registration system and encourage local enforcement were also proposed.

In making these suggestions, it was realized that a long period of time would be required to change the attitudes and habits of the public in respect to such matters. In the meantime, SAG recommended an increased use of sampling and more frequent interviews for the vital statistics survey attached to the quarterly survey of the economic activity of the population. Effectuation of these recommendations depends upon budgetary provision.

## XII

### ELEMENTS NEEDED FOR FURTHER STATISTICAL DEVELOPMENT

Chapter XI has detailed a number of specific statistical activities in which the Statistical Advisory Group was seeking improvement at the time of contract termination. If its work respecting these is continued, and which needs to be continued, much of the present momentum of statistical development can be preserved. Otherwise the momentum may be lost. In the long run, however, improvement depends less upon particular statistical activities and series than upon the climate within which it is nurtured. Attention was given this factor in Chapter X. The purpose of the present chapter is to summarize several climatic needs of a general and comprehensive character about which Korea's governmental and intellectual leaders should be concerned during the next half-decade.

#### The Time Factor

Approximately 284 man months have been spent upon the Korea statistics project in the field, over a period of approximately five years. On average, professional time somewhat greater than that of three statisticians has been devoted to it continuously. Adding administrative and secretarial services, the average field staff time was equivalent to that of four and three quarters persons. The size of such a staff is less significant than its quality and the reach of its influence. We believe that the qualifications of those engaged in the project have

been exceptionally high and that their influence has been far reaching and pervasive.

The group's accomplishments have been limited by an uncontrollable factor -- the time required for social change. This factor is inescapable in all development, whatever the subject, sponsorship, or geographic area. For example, the following excerpts from an address by the Ford Foundation representative in India, pertaining to farm economic development in that country, apply equally well to statistical development in Korea. To indicate the parallel, references to statistics have been inserted in brackets:

"Even under the best of conditions, agricultural [statistical] development cannot come overnight. It has to be created step by step, phase by phase, over a span of time.... In development, as in any growth process, there is no substitute for time....  
... purposeful development of the agricultural economy [statistical system]... involves many undertakings, activities and processes....  
... it is concerned with meshing all of these together into new forms and relationships that will add up to an improved system ... the product must be an overall agricultural [statistical] system that is fitted to the needs and desires of the society.... It is not a single piece of work that can be buttoned up and laid aside as finished within a short period of time, but is a mosaic of many pieces and processes which can only be built up through extended and persistent effort."<sup>1/</sup>

Five years has indeed been too short a time for the technical transformation at which the Korea statistics project was directed. Nevertheless, the project has set in motion forces and trends by means of which the Republic may continue its statistical transformation through its own efforts. Surveys & Research Corporation shares the opinion of

---

<sup>1/</sup> "Overcoming the Obstacles to Farm Economic Development in the Less Developed Countries" by Douglas Ensminger, Representative in India, Ford Foundation. Journal of Farm Economics, Volume XLIV, No. 5 (December 1962), pages 1367, ff.

Mr. James S. Killen, Director of the United States Operations Mission in Korea, that although external advice concerning Korea's statistical development and program may sometime again be needed, it is now timely for the ROK Government to try out the wings that its recent advisors have fashioned.

### The Painful Need to Think

The eagerness of young Koreans for education and "advancement" was mentioned in the preface. The writer regards this eagerness as genuine. Korean students of his acquaintance in the United States are simultaneously employed full-time while carrying full course schedules in universities. Their ambition is boundless, their efforts prodigious. Nevertheless, with the ambivalence also noted in the preface, the Korean character sometimes exhibits traits which, when shown by Western students, are attributed by their teachers to intellectual laziness.

Members of the Statistical Advisory Group have sometimes yielded to requests to offer courses in statistics for ROK Government employees only to encounter a sudden and drastic decline in attendance when the students discovered that class preparations of their own were expected. How is this to be explained? Does it imply a desire for status as an "intellectual" without the expenditure of effort to attain it? Does it reflect an aspect of the "revolution of rising expectations," in which the fruits of learning are sought as a right without an obligation to earn them? Is the cause and effect relation between thought -- a painful process -- and the value of its end-products overlooked or not understood?



The anomaly seems related to a "blind spot" in Korean statistical thinking which leaves serious gaps in the results of statistical work. It appears in the neglect to analyze these results (as also the preceding procedures) in relation to validity, meaning, and use.

Thus, in the case of most statistical publications, "no thought has been given to the needs, if any, of the recipients. No appraisal of demand for or use of the data has been made.... It is as though publishing is an end in itself, as indeed it may be."<sup>1/</sup> Again, data are published "without explanation of their possible or probable deficiencies, leading to false conclusions and to the use of such data for purposes not consonant with their meaning or validity."<sup>1/</sup>

Blind spots are illustrated by the failure to make any real analysis of the information obtained in the new survey of the economic activity of the population mentioned in Chapter XI. The likelihood of its improvement was deemed doubtful by the Statistical Advisory Group, at the time its service ended, because of "the unfortunate tendency to treat statistical activities in a routine fashion once they have begun."

For quite different but analogous reasons the group felt doubts that the Statistical Council would become an effective instrument for the improvement of statistics in Korea. Starting with monthly meetings when the regulations governing it were promulgated in March 1962, the Council had but three meetings in the last half of that year and only one in the first five months of 1963. Once more, the reasons are difficult

---

<sup>1/</sup> Statistical Publications in Korea, July 5, 1961, pages 3 and 5.

to pinpoint. Are Council members overloaded with work in their regular positions? Are they indifferent to the technical and administrative questions to which they are asked to give attention? Or are the kudos of Council membership being enjoyed without a sense of need to work for them?

The cause and effect relation between mental effort and achievement has to be learned. Despite the earnestness and obvious sincerity of agency heads like Director Kahng, O Chun of the Bureau of Research and Statistics, it is a lesson that many Koreans in statistical agencies, including some with considerable responsibility, have not learned -- or, if learned, to which they appear indifferent. They seem to hope that the good things of life, including salaries, will come easily, without effort. Their work is routine, absentminded, lacking self-criticism. Ingenuity is frequently devoted to the invention of shortcuts as alternatives to the mental labor of planning thorough technical or administrative programs.

The failure to plan a sufficient time in advance for such a major statistical enterprise as the 1963 census of industry was mentioned on page 106. It may reflect the pressure of other work and official demands upon the Bureau of Research and Statistics, in which case official judgments somewhere concerning work priorities must be criticized. If it reflects unfamiliarity with the complexities involved in adequate census preparations, which were constantly reiterated by the Statistical Advisory Group over a long period of time, the wish to avoid hard work is unavoidably implied.

If Korea's statistical development is to continue, it must receive an intensive application at all levels of service of the superior intellectual capacities that Koreans unquestionably possess.

Utilization of Available Competence  
in Responsible Positions

The quality of a nation's statistics, and hence the realism of its social and economic policies, can be no better than the technical abilities of those who produce the statistics. In Korea there is increasing recognition of this Western truism and there has been considerable upgrading in the qualifications of those occupying statistical positions; but overall these qualifications remain too low. It is commonplace to say that statistical personnel should have more technical training.

The force of this statement, in which we concur, has been lessened by the nonuse or inefficient use by the ROK Government of available services by technically trained people. The incentives held out to such persons for government service, especially to those trained abroad, are weak in the face of employment practices that place age and seniority ahead of ability; that assign important posts in statistical agencies to persons without qualifications for them; that accord little credit in appointments or promotions to technical training and experience.

An example was the release from the Bureau of Statistics in 1961 of the only two men then on its staff who, in the opinion of the Statistical Advisory Group, had sufficient technical ability and

experience to plan and carry on the Bureau's work. One of them, Park, Chai Bin, M.D., D.P.H. (Stanford University), after temporary employment in the Korean staff of SAG, accepted a technical assignment with the World Health Organization and is now in its service in Brazil.

Another example pertained to a selected group of twenty-six government employees sent to Tokyo under the statistics contract for six weeks of IBM training in data processing machine operations. Their trip was timed so as best to serve census data processing schedules. After the return of twenty-five to Seoul, nearly half were assigned to positions within the ROK Government in which this special training could not be utilized. At the same time, the tabulation section of the bureau, from which most had been selected, was suffering from a shortage of staff possessed of the training these former employees had received.

Still another example relates to the establishment (see pages 121-124) of an all-important mechanism for central control and coordination of statistics. It awaits the appropriate assignment of three to five highly competent Korean statisticians. Men are available who would meet the requirements, although already engaged elsewhere in productive work. Whatever the reasons, the needed assignments have not been made.

#### Recognition of Statistics as Technical and Professional

This is a closely related topic. The technical training in statistics which an increasing number of young Koreans are receiving in the United States or other foreign countries, and the opportunities it brings them to remain there (assuming legal requirements can be met)

are not offset by inducements to return home. It cannot be expected that the home country will offer them salaries commensurate with those for equivalent positions in the West. It could offer them professional status and the deference and prestige accorded scientists and members of professions in other fields.

There are probably survivals here of the traditional Chinese (and Korean) emphasis upon classical learning. The chief present obstacle to an enhanced status for statisticians appears to result from lack of understanding of the nature of their work. There is a lag in official and public recognition that statistics is a field of science -- that those who take advanced training in its theory and practice should be accorded scientific and professional standing. Until such recognition is given it will be difficult, for example, for the Bureau of Research and Statistics, in spite of its enormous advances in public esteem (see pages 95-98), to obtain a position among government agencies commensurate with the technical character and requirements of the work given it.

Fortunately, there are many evidences, some of which have been given in this report, of recent and favorable changes in official and public evaluations of statistics and statisticians. If the trends in this direction continue, as there seems no reason to doubt, Korea may not lose to other countries in the future a high proportion of its talented and statistically trained young people.

Growth of a Statistical Profession

National statistical improvement is inseparable from a close and continuing association among those in statistical work. People engaged upon the same project, whether in government, the universities, or business, will be in constant communication. Those working upon projects which should be related (for example, the five industry surveys mentioned on page 123) need to be familiar with each other's objectives, plans, and procedures through frequent discussion and negotiation. The facilitation of such discussion and negotiation is one of the chief contributions of a coordinating staff.

Superimposed upon individual association related to specific activities will be an awareness of professional identification as statisticians. This will embrace all who have similar or closely related interests, whether theoretical or applied, and whatever the specific nature of their work and whoever the employers. This "consciousness of kind," as it was called by the American sociologist Franklin H. Giddings, will override and supplement but not replace the loyalties and responsibilities of individuals to their respective tasks. Those who develop this consciousness in the field of statistics will regard themselves as belonging to the same profession.

Such people in any country will tend to seek additional means of association and communication among themselves by the formation of an organized association or society. The International Statistical Institute

has listed fifty-two national statistical societies in all of the continents.<sup>1/</sup> Fifteen of them have met the rigid requirements of the Institute for affiliation with itself. Following is one entry:

Korean Statistical Association

Founded:	1959
Address:	Bureau of Statistics, Home Ministry, Seoul
Pres.:	Soon-Eung Chung; Sec.: Young-Jo Han
Members:	Regular and Special members
Plenary meetings:	One per annum

Information which is given for other statistical societies on such matters as dues, number of members, and publications does not appear.

Behind this entry is a history of naiveté on the part of both the project director and leaders of ROK statistical activities. The growth in a Western sense of a statistical profession and the organization of a professional statistical association were among the early goals of the former, communicated to and urged upon Korean officials and technicians. But professional interests and professional societies as known in Western countries have little precedent in Korea. When such societies have been created, they have tended to be "paper organizations." Designation by whatever means as an officer of one of these paper organizations has been more equivalent to an honorific citation than to a bestowal of responsibilities. The suggestion of a "statistical association," therefore, was easily seized upon in form with little conception of a corresponding organizational substance.

With possibly more realism than in parallel instances that could be described, "The Korean Statistical Association" was established by the

---

<sup>1/</sup> Revue de l'Institut International de Statistique, Vol. 29, No. 1, 1961, pages 152-165.

Director of the Bureau of Statistics as a part of his organization, with its name, along with that of the bureau, on the building entrance. It was given a room in the bureau's offices with its name on the door. The room was ostensibly to contain a library when acquired.

The obvious next step was to gain national and international recognition. In the draft of a communication petitioning affiliation with the International Statistical Institute, the Director reported 4,000 members. These included the hypothetical holders of statistical positions in guns, proposed in an act that was being drafted for presentation to the General Assembly. The question of dues did not arise until somewhat later when SAG's chief of party, Mr. Lawrence, inquired concerning his own. A payment from him was presently accepted and acknowledged by a receipt numbered "2," suggesting that the Director must have hastened to pay dues ahead of him.

In spite of such beginnings out of Alice in Wonderland, the outlook for a genuine statistical profession and organization in Korea is promising. A few meetings of the "Association" were held and showed some promise. One of these, to listen to a farewell address by Mr. Lawrence, heard also a carefully prepared and informative paper by Mr. Ahn, Chang Jik, assistant director of the research department of the Bank of Korea and former trainee of the Census Bureau in Washington. It described and interpreted the Bank's statistical activities. The "Association" has seemingly "gone with the wind," leaving little if any substance or record behind it. Meanwhile, the first Korean Statistical Conference (see pages 102-103) has been a more encouraging indication of the growth of a professional



consciousness among Korean statisticians. After the conference, "a number of the speakers and other interested persons assembled ... for the purpose of considering the establishment of a statistical association. Three men were designated to constitute an organizing committee. The first step of this committee will be to communicate with persons invited to the Statistical Conference to determine their interest in the organization of a statistical association. The statistical association would sponsor a number of conferences annually and also publish some kind of journal. It is contemplated that the papers presented at the Conference would be published in an early issue of such a journal."<sup>1/</sup>

The problem of finding financial support for professional organizations and for professional meetings like the Statistical Conference was solved in the case of that conference by a grant from the Asia Foundation. Incapacity for self-support is one of the greatest obstacles to the kind of professional statistical activities with which Western nations are familiar. It provided a plausible rationale for the captive status within the Bureau of Statistics of the first "Korean Statistical Association."

#### Faster Growth of a Statistical System

Underlying all efforts of the Statistical Advisory Group has been the hope of leaving behind it well established beginnings of a functioning statistical system. For nearly two years a realization of this hope

---

<sup>1/</sup> Semi-Annual Report, January 1 - May 31, 1963, Statistical Advisory Group, Seoul, Korea, page 10.

has seemed within grasp. Lacking has been a final push past the takeoff point that would assure the system's creation and continued growth, without danger of retrogression.

A statistical system includes many separate statistical activities, usually serving different purposes and under different ministerial or other managements, that nevertheless are so interrelated as to provide mutual support for the processes and findings of each. They intermesh. Intermeshing or integration are also essential or at least highly desirable when any activities impinge upon others in respect to the timing of surveys, the identity of the respondents who are queried, the definitions employed in collecting information, the time periods for which data are obtained, the classifications used in tabulation, the use of data processing equipment, the scheduling of publication, or any of many other respects in which overlapping or unnecessary duplication of work are otherwise probable or possible.

The processes of intermeshing or integration of effort in matters of this kind are called statistical coordination. To be effective, coordination requires some degree of central statistical control. In the absence of coordination and control -- for example to insure that by means of a standard industry classification primary data on manufacturing production can be related to figures on manufacturing employment to produce figures on productivity -- much of the value of many statistical activities may be sharply reduced. The money expended upon them may to a large extent be wasted.

This was the situation in Korea when, for example, at the end of 1962, five overlapping surveys of industrial production were under way or being planned simultaneously by as many separate agencies of the ROK Government. To have brought these five surveys into a coordinated program would have been an appropriate function for a small staff of statistical coordinators. They would have needed unquestioned technical ability, prestige of personality and office, and authority behind them sufficient to sway the actions of top ministerial officials.

SAG suggested two alternative directions of development for Korea to enable it to handle such situations.<sup>1/</sup> One was a small special staff close to the center of governmental authority to exercise statistical coordinating functions. This was the well established pattern in the Governments of the United States, Japan, and the United Kingdom. The second would follow the precedent of Canada by placing statistical coordinating responsibilities within the Bureau of Statistics, Korea's most important collector and processor of statistical data. The first of two conditions attached by SAG to the second alternative was met when the Bureau of Statistics was comparatively dissociated from political and other nontechnical influences within the Ministry of Home Affairs by its transfer to the Economic Planning Board. The second condition, that it be provided with a technical staff of a much higher level of competence than it now possesses, has not been met.

The ROK Government has apparently accepted the second alternative. If its choice is maintained and if it is to bring about the development

---

1/ Better Statistics in Korea, Chapter IV and pages 42-43.

of a statistical system, the Bureau of Statistics must be strengthened sufficiently to become an effective coordinating agency. This will be useful in itself, but it will take considerable time; hence SAG has greatly preferred its first alternative.

Whichever of the two choices may ultimately be settled upon, the establishment somewhere in the ROK Government of a strong central controlling and coordinating mechanism is the single most pressing statistical need that remains behind after the departure of the Statistical Advisory Group.

## APPENDIX A

### Names, Functions, and Dates of Service in Korea of Members of Field Staff, Statistical Advisory Group Surveys & Research Corporation

The following list includes the names and dates of service of all Americans who served in Korea in any capacity, however temporary, under the contract during its five years of operation. It does not include the names of members of the Korean staff who were locally engaged and paid from counterpart funds supplied by the ROK Government. As indicated, the list is limited to those who served on the field staff. Mention should be made, however, of two additional data processing advisors, Mr. Benny W. Blosser and Mr. Charles E. Greene, who, together with Mr. Binder, data processing consultant, performed services in Washington, D.C. in September and October 1959 involving preparation of criteria and specifications to aid the Korean Government in the selection of statistical equipment.

#### Project Director

Dr. Stuart A. Rice

##### Dates of Service in Korea:

May 7, 1958	-	July 28, 1958
March 11, 1960	-	April 8, 1960
June 10, 1960	-	December 9, 1960
July 27, 1961	-	August 29, 1961
January 1, 1962	-	January 29, 1962
November 2, 1962	-	December 17, 1962

#### Assistant Project Director

Mr. Libert Ehrman

##### Dates of Service in Korea:

April 6, 1959	-	May 18, 1959
October 12, 1959	-	November 6, 1959

APPENDIX A (continued)

Statistical Advisors

Gabriel F. Cazell	June 16, 1961	- November 14, 1962
Lorand Dabasi-Schweng	May 16, 1958	- March 16, 1960
Scott V. Fairley	June 29, 1960	- May 31, 1963
Harold Israel	July 13, 1960	- May 31, 1963
Charles B. Lawrence, Jr.	April 1, 1959	- August 27, 1960
(Chief of Party from January 1, 1960)		
John W. McBride	May 9, 1960	- November 6, 1961
Herbert O. Rogers	May 16, 1958	- March 18, 1960
(Chief of Party from July 29, 1958 to March 18, 1960)		
Collis Stocking	April 21, 1962	- May 31, 1963
Benjamin J. Tepping	December 3, 1960	- May 31, 1963
(Chief of Party)		
David Yentis	September 19, 1960	- March 12, 1962

Consultants

Sidney Binde.	March 16, 1959	- May 15, 1959
J. Edward Ely	October 19, 1961	- December 9, 1961
James S. Fitzgerald	October 18, 1960	- February 25, 1961
J. Arnold King	August 9, 1960	- September 16, 1960 and
	August 28, 1961	- October 2, 1961
Marshall K. Wood	August 9, 1962	- August 30, 1962

Secretaries - Administrative Assistants

Norma Jean Collier	February 8, 1960	- April 25, 1963
Joan Mary Eiffert	November 30, 1959	- February 19, 1960, and
	June 10, 1960	- February 28, 1961
Mary Catherine Elward	June 18, 1958	- November 13, 1959
Rita M. Johnston	July 27, 1959	- September 7, 1959
Elizabeth M. Lynch	March 6, 1961	- August 20, 1961, and
	August 21, 1961	- May 31, 1963
Marilee M. Wade	December 4, 1961	- January 14, 1962

APPENDIX B

Selected List of Statistical Courses, Lectures, and  
Addresses Given to Korean Audiences by  
Members of Statistical Advisory Group

1958

Cooperation between Business and  
Government in Statistics

Stuart A. Rice, address, seminar in  
administration arranged by OEC and  
held at Onyang Hot Springs, July  
1958

Government Statistics and  
Business

Lorand Dabasi-Schweng, address,  
seminar in administration arranged  
by OEC and held at Onyang Hot Springs  
July 1958

Practical Application of Statistics  
in Modern Business

Herbert O. Rogers, address, seminar in  
administration arranged by OEC and  
held at Onyang Hot Springs, July 1958

Statistical Development in Korea

Stuart A. Rice, OEC Technical Lecture  
No. 8, Seoul Chamber of Commerce  
Building, July 15, 1958

Uses of Statistics in Social Work

Lorand Dabasi-Schweng, lecture,  
social work seminar sponsored by  
Ministry of Health and Social Affairs,  
August 1958

Importance of Statistics in  
Public Administration

Lorand Dabasi-Schweng, eight lectures,  
National Officials Training Institute,  
October 1958

1959

Statistical Needs of Korea

Libert Ehrman, address, first meeting  
of the Census Council, April 9, 1959

Economic Development Planning  
and Statistics, and  
Problems Involved in Planning a  
Census of Population and  
Housing

Charles B. Lawrence, Jr., and Lorand  
Dabasi-Schweng, lectures, Research  
Department, Bank of Korea, September  
1959

Training of Enumerators in  
Agricultural Census

Lorand Dabasi-Schweng, lecture and  
film, officials of Ministry of Agri-  
culture and Census Council, November  
1959

APPENDIX B (continued)

1960

Korea's Demographic Problem

Stuart A. Rice, address, Korean Institute of Demographic Research, March 26, 1960

1962

Elementary Statistics

Benjamin J. Tepping, lecture series, for personnel of the Economic Planning Board, January and February 1962

Sampling

Benjamin J. Tepping, lecture, Research Section, Ministry of Public Information, April 6, 1962

Errors in Surveys

Benjamin J. Tepping, lecture, Research and Statistics Section, Ministry of Agriculture and Forestry, April 27, 1962

Elementary Statistical Methods

Gabriel F. Cazell, weekly lectures, Bank of Korea, April, May, June 1962

Lectures

Collis Stocking, for survey interviewers' class August 10, 1962, and in-service training class for government statisticians, August 20, 1962, at Kun Kuk University

1963

Lecture

Benjamin J. Tepping, for enumerators for the Ministry of Agriculture and Forestry Farm Survey, January 14, 1963

Lecture

Benjamin J. Tepping, for enumerators engaged by Bureau of Research and Statistics for field work in 1963, January 16, 1963

Marketing Surveys

Benjamin J. Tepping, address, National Training Center on Agricultural Marketing, February 9, 1963



**APPENDIX B (concluded)**

**1963 (concluded)**

<b>Basic Statistical Methods</b>	Lectures by staff members during week of training of enumerators for Farm Economic Survey of Ministry of Agriculture and Forestry; for field work of Bureau of Research and Statistics; and for other government personnel. January 1963
<b>Sampling Methods</b>	Benjamin J. Tepping, lecture class three hours per week three months for personnel of Bureau of Research and Statistics, February - May 1963
<b>Machine Data Processing</b>	Scott V. Fairley, Director, eleven orientation classes for 174 representatives of 18 Korean agencies, February, March, April 1963
<b>Techniques of IBM Wiring</b>	Harold Israel and Scott V. Fairley, classes three times weekly for members of machine tabulation section of Bureau of Research and Statistics, April, May 1963
<b>The Post Enumeration Survey Program for the 1960 Korean Censuses</b>	Harold Israel, address, Korean Statistical Conference, College of Liberal Arts and Science, Seoul National University, May 11, 1963
<b>An Advisor Looks at Statistics in Korea</b>	Benjamin J. Tepping, Korean Statistical Conference, College of Liberal Arts and Science, Seoul National University, May 12, 1963

APPENDIX C

Partial List of Reports to ROK Government on  
Statistical Subjects (Published Works and  
Unpublished Memoranda or Communications)

Monographs, Published in Seoul in Korean and English:

1. Better Statistics in Korea, November 21, 1960
2. Statistical Publications in Korea, July 5, 1961
3. Statistical Vocabulary, January 1, 1962
4. A Sample Survey Service in Korea, February 1, 1962
5. Korean Import and Export Statistics, March 1, 1962
6. The Korean Wholesale Price Index, March 1, 1962
7. Economic Activity Concepts, March 1, 1962

Introduction to Punch Card Data Processing, January 15, 1963  
(Scott V. Fairley)

Translation, English to Korean:

Introduction to Statistical Analysis, Wilfred J. Dixon and  
Frank J. Massey, March 1962

Memoranda and other Communications:

Report of Field Trip to Kyongsang Pukto and Kyongsang Namdo,  
June 2 - 7, 1958 (Stuart A. Rice)

Data Processing Equipment Needs of the Government of the Republic  
of Korea, A Report to the Census Council, May 11, 1959,  
33 pages, 7 attachments (SAG report based on a study by Sidney Binder)

Status Report on Budget and Program Requirements for National  
Statistics in the Republic of Korea, June 3, 1959 (SAG Staff)

Draft List of Questions Being Considered for the 1960 Census of  
Population and Housing in Korea, Memorandum to the Census  
Council, June 19, 1959, 24 pages (SAG Staff)

APPENDIX C (Continued)

Participant Training for the 1960 Census, memorandum to Tchah, Kyun Hae, Secretary General, Census Council, July 22, 1959, 5 pages and 2-page appendix (Charles B. Lawrence, Jr.)

Statistical Activities of the Government of the Republic of Korea (preliminary report), January 1960 (SAG Staff)

Memorandum on Statistical Organization, to the Chairman and Members of the Census Council, September 1960, 10 pages (Stuart A. Rice)

Analysis of Korean Agriculture Bank's Tabulation of Area and Production of Rice and Barley in 1959 on 630 Sample Farms throughout Korea, April 18, 1961, 12 pages, 8 tables, 5 scatter diagrams (John W. McBride)

Suggested Program for Increasing the Effectiveness of the Research and Statistics Section of the Ministry of Agriculture and Forestry (preliminary survey), April 18, 1961, 9 pages (Oh, Heung Keun and John W. McBride)

Sample Design for the Surveys of Agriculture Economy, Production Cost and Production Yield, memorandum to Oh, Heung Keun, April 1961 (Benjamin J. Tepping and Harold Israel)

Nursing Skill Resources in Korea, memoranda concerning plans for obtaining data on nursing personnel, May 2 and June 22, 1961, including data gathering form, instructions, and tables to be prepared (David Yentis)

The Census in Sondupo - A Case Study, July 13, 1961, 17 pages (David Yentis)

Supply of Personnel, Machines and Materiel for Data Processing Center, memorandum to Acting Director Chang, Bureau of Statistics, Economic Planning Board, August 18, 1961, 7 pages (Benjamin J. Tepping and Harold Israel)

Cultural Differences and the Korean Census, August 1961 (David Yentis)

Suggestions for Improving the Quarterly Statistical Review of Agriculture and Forestry, memorandum to Lee, Sang Eun, Chief, Survey and Research Section, Ministry of Agriculture and Forestry, October 11, 1961 (John W. McBride)

Report on Economic Indicators in Korea (preliminary), December 1, 1961 (Gabriel F. Cazell)

APPENDIX C (Continued)

Farm Mechanization Project in Niiike Village of Japan, 1961  
(John W. McBride)

Letter to Kim, Yu Taek, Chairman, Economic Planning Board,  
concerning statistical coordination and organization and  
commenting on Statistics Law, January 22, 1962, 6 pages  
(Stuart A. Rice and Benjamin J. Tepping)

Labor Force Survey, memorandum to Kahng, O Chun, Director,  
Bureau of Statistics, February 13, 1962 (Benjamin J. Tepping)

Economic Activity of the Korean Population, memorandum to Kahng,  
O Chun, Director, Bureau of Research and Statistics,  
March 2, 1962 (Benjamin J. Tepping)

Tabulation Schedule for Processing the Censuses, memorandum to  
Kahng, O Chun, Director, Bureau of Statistics, March 7, 1962,  
5 pages, 2 tables (Benjamin J. Tepping)

Letter to Song, Yo Chan, Prime Minister and Chairman of the  
Economic Planning Board, concerning statistical coordination,  
March 19, 1962 (Benjamin J. Tepping)

Letter to Song, Chung Pum, Vice Chairman, Economic Planning Board,  
concerning central statistical organization, May 4, 1962  
(Stuart A. Rice)

Economic Activity Survey, memorandum to Chang, Sin Kyu, Chief,  
Economic Statistics Section, Bureau of Statistics, June 19, 1962  
(Collis Stocking)

Letter to Kim, Yu Taek, Chairman, Economic Planning Board, concerning  
central statistical organization, July 17, 1962 (Stuart A. Rice)

Computation of Gross National Product in Korea (third draft),  
July 26, 1962 (Gabriel F. Cazell)

The 1960 Input-Output Study of Korea, August 28, 1962 (Marshall K. Wood)

Technical Manpower Study, memoranda to Bureau of Research and  
Statistics and Bureau of Technical Development, Economic  
Planning Board, October 26, 1962, November 20, 1962, February 1,  
1963, March 25, 1963, April 10, 1963 (SAG Staff)

Letter to Tchah, Kyun Hae, Vice Chairman, Economic Planning Board,  
concerning statistical coordination and organization,  
December 10, 1962, 6 pages (Stuart A. Rice)

APPENDIX C (Concluded)

Preliminary Outline for a Study of Technical Manpower Resources and Requirements in Korea, 1963, Scope and Method, January 4, 1963. Submitted to Kahng, O Chun, Director, Bureau of Research and Statistics. (Collis Stocking)

Review of Analysis Presented in the Sample Tabulation Advance Report, January 17, 1963, 18 pages and 2-page appendix (Harold Israel)

Letter to Kahng, O Chun, Director, Bureau of Research and Statistics, concerning use of Korean Data Processing Center, February 28, 1963 (Benjamin J. Tepping)

Analysis of the Post Enumeration Survey, memorandum to Cho, Yong Mok, Population Section Chief, Bureau of Research and Statistics, March 25, 1963, 14 pages (Harold Israel)

Letter to Kahng, O Chun, Director, Bureau of Research and Statistics, concerning use of Korean Data Processing Center, April 9, 1963 (Stuart A. Rice)

APPENDIX D

Series of Three Lecture and Laboratory Courses Entitled  
"Introduction to Punch Card Data Processing"

Presented by Scott V. Fairley,  
Statistical Advisory Group  
April 1963

Attendance by Organization

Banks

Bank of Korea	29
Medium Industry Bank	2
Korean Reconstruction Bank	10
National Agricultural Cooperative Federation	2

Ministries

Ministry of National Defense	41
Ministry of Justice	3
Economic Planning Board	4
Ministry of Health and Social Affairs	1
Ministry of Communications	4
Ministry of Agriculture and Forestry	5
Ministry of Public Information	2
Ministry of Foreign Affairs	4

Schools

National Scientific Research Institute	1
Seoul National University	2
Ewha Women's University	2

City Governments	8
------------------	---

Provincial Governments	33
------------------------	----

KMAG	21
------	----

<u>Total</u>	174
--------------	-----